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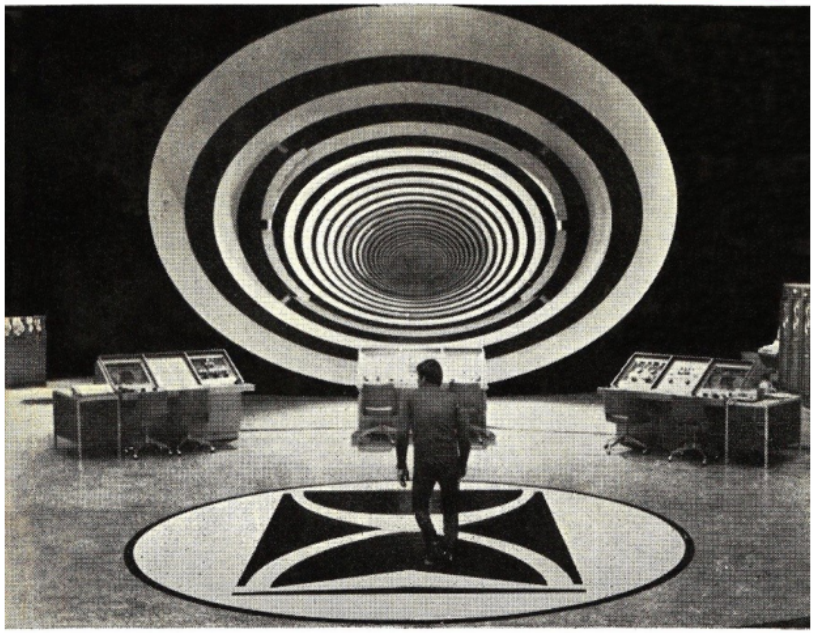

by MURRAY LEINSTER

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THE TIME TUNNEL

MURRAY LEINSTER

PYRAMID BOOKS • NEW YORK

THE TIME TUNNEL
A PYRAMID BOOK
First printing January, 1967

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Printed in the United States of America

PYRAMID BOOKS are published by Pyramid Publications, Inc.,
444 Madison Avenue, New York, New York 10022, U.S.A.

The TIME TUNNEL

1

A JET appeared as if by magic outside the helicopter windows, moving so fast that one's eye could not quite follow it. It went across the chopper's bow, and bellowed straight up, and vanished, and flashed down and past and past again. Then it vanished in the distance. While it was nearby it was not possible to hear anything but the combined uproars of the copter and the jet. They were apparently rivalling each other in the amount of noise they could produce. But the jet went away. Seconds after its passing its afterburner flamed and it picked up speed and a sonic boom made the copter quiver in addition to all the rest of the din.

Tony Newman did not react, but Senator Clark spoke indignantly. Tony could not hear him. He picked up a communicator and motioned to its companion. Clark fumbled. Then Tony said politely, "You said something, sir?"

He could have shouted in the Senator's ear—they were close enough—but it was his intention to be very polite. Senator Clark was chairman of a committee that had much to do with defense. It would not be diplomatic to be anything but elaborately polite. But Tony couldn't put a cordial expression on his face. He knew what Clark was making this trip for. To Tony he was an enemy; someone to be frustrated if possible. But it was necessary not to ruffle him. So Tony said again, "You said something, sir?"

Clark spoke once more into the unfamiliar transmitter. He was annoyed by the need to use it across no more than a yard or so of ear-splitting racket.

"I said this is the devil of a noise!"

"We're flying low," explained Tony, "and this model copter is famous for its noise. It's for freight, usually. And we're flying low—only fifty feet up. The noise is reflected back to us."

"Why?"

"To stay off radar screens," said Tony. "The traffic watch radars in these parts are adjusted to miss us. There's no point in having civilians know there's anything going on out here."

The Senator looked out of the windows. Nearby desolation seemed to flow toward and past the ship. All was desert, without even water-starved clumps of sage or small pods of cactus. A way ahead there were the tops of mountains gazing tranquilly upon the barrenness over

which the copter roared. Behind, there was nothing. To either side there was nothing. Below a spreading swirl of sand followed the flying object. It made a dust trail that subsided slowly far to the rear.

Clark said fretfully, “But it doesn’t look like anything’s going on! And why did that jet buzz us?”

Tony explained again.

“This is supposed to be part of a rocket range closed to civilians. Nobody should cross it. The jets make sure nobody does. But our pilot was identified by his television image—the camera’s up in the pilot’s area. He’s all right, so we are.”

The rotor overhead made deliberate rotations. The copter went across the desert with a swirling, spreading dust cloud beneath it. There was not a sign of life anywhere, not even a jackrabbit. There was no single buzzard in the sky. At the horizon there were waverings and blurrings of reality. Clark said irritably, “Blasted foolishness!”

He stared out the windows. Sere, bare, barren desert. There was no sign that any human being had ever been here. Tony said nothing. It was true that somewhere beneath the yellow dust landscape a good many hundreds of millions of dollars lay invested in something that had to be kept wholly secret. It was so wildly imaginative that Congress would grow indignant if it found out that funds had been funnelled into it without due permission and authority.

“Mystery!” said Clark. “Secrecy! I’m not usually considered untrustworthy, but I wasn’t even briefed on what I’m to see!”

Tony only nodded. The noise was loud enough to make a sign preferable to speech, even with the communicators at hand.

“Simply told to come here,” fumed Clark, “to listen to what I was told and to form my own opinion on whether it was worth the money or not. Why the mystery? I can understand things being classified. But why not even a briefing?”

“You probably wouldn’t have believed the briefer,” said Tony politely. It occurred to him that he should probably have added “Sir,” but he was embittered by his conviction that Clark would not be favorable to anything he hadn’t known of in advance.

“Why?”

“I wouldn’t have,” admitted Tony. “If somebody had told me beforehand what you’re going to see, I wouldn’t have believed him. But I’ve been working on it. I’ve had a part in it.”

“What’s your part?”

“I’d rather not say, sir,” said Tony. This time he did add the “sir” to indicate respect he didn’t feel but ought to show.

Clark fumed.

"I've come this far and still I'm not trusted with knowledge of what I'm to see! I resent it!" He eyed Tony. "I've a damned good notion to demand that I be taken back to where I got on this plane; to where I can get transportation back to Washington! And I have some authority there! I'll see—"

"You'll see everything here, sir," said Tony persuasively. "If you talk from knowledge what you say will have more effect than guesswork. If you go on and look things over, you may not like it but at least you'll know what you don't like, and why."

Senator Clark stared at him. Then he pressed his lips together. He looked out at the desert again. By his expression it appeared that he didn't know what he was going to see, but already knew he wouldn't like it. It wasn't a good state of things. Project Tic-Toc had been set up in secrecy because it would not be possible to convince Congress of the need for it. More than that, public opinion in America would not permit it. No member of Congress would dare to vote for it. The nation would lose every friend it had, if the project—and especially its success—was revealed. And it wasn't a matter that a group of nations could undertake together. There could only be one Project Tic-Toc. More than one was unthinkable.

But Tony had spent the seven years since he got his Ph.D. in working on it, for it, and in it. To disapprove of it seemed to him incredibly shortsighted. But Senator Clark's disapproval seemed already earned.

The copter windows went suddenly dark; even the plastic window between the pilot's cubbyhole and the seats of the two passengers.

"More security?" asked the Senator acidly. "I'm not trusted to look at empty desert for fear I'll find out where I am?"

Tony said unhappily, "That's right, sir. That's the way it is."

Some people didn't want to know classified information, just as they wouldn't want to carry money that didn't belong to them. Clark wasn't that kind. As chairman of a committee that had much to do with defense, he did have top clearance. But the practices he resented in connection with Project Tic-Toc were extreme. They were not, though, questionings of his loyalty but precautions against a possibly unconscious slip.

It remained pitch dark in the passenger compartment, which was filled to overflowing with pure raw noise. Presently the ship changed course. It changed course again and again. All sense of direction vanished. It felt as if the copter were flying blindly in a world of blackness.

A long time passed. Then the motor noise changed. The rotor sounds modified. The copter was descending. It touched the ground

and the rotors slowed to idling speed. The windows cleared, and showed Senator Clark's face as tense-lipped and angry, Tony rose.

"We get out here, sir," he said politely.

Clark stood up. Silently, but coldly angry, he followed Tony to the ground. Tony moved away from the copter. Its rotors revolved more swiftly. It lifted, turned, and went away.

The two of them then, Tony Newman and Senator Clark, were left standing in blinding sunshine upon a sandy desert surface. There was nothing in sight anywhere to indicate that any human being had ever stood here before. The copter dwindled in the distance. There was silence. Tony shifted his weight from one foot to the other and the sand underfoot made a squeaking noise. Clark turned angrily to him. The copter had vanished by then, and absolutely nothing seemed to stir anywhere.

"Is this," asked Clark sarcastically, "what I came out here to see?"

"No," said Tony. "We just have to wait."

He waited. Clark fumed. The desert was terrifying because it was so empty and so dead. Once, Clark saw a movement out of the corner of his eye. He turned his head quickly, and something dark and sinuous writhed deliberately from one place to another.

Tony did not comment. Clark clamped his jaws. They stood in the center of immensity, waiting where apparently nothing could happen to be waited for. Then Tony nodded toward the distance.

There was a dark mote in motion, already halfway toward them from the horizon. A small plume of dust rose up behind it. It drove and drove across the dead landscape. Clark said nothing. The mote became a speck, and then a dot, and then it had shape. It was a car. It could be nothing else. It came on and on, and it was a dust-colored coupe with huge sand tires. It swayed and swerved because of the crumbled stuff under its wheels. It came up with a rush and stopped with a fine precision so that Clark had to take exactly two steps to complete the opening of the car door and to step inside.

"There's a canteen on the back seat," said Tony.

He got into the front beside the driver. The driver wore ordinary civilian clothing and he nodded in a friendly fashion and stepped on the gas. The car turned and began to retrace its own trail back toward the horizon.

A hot wind came around the windshield. The driver said casually, "Things all right, Tony?"

"I doubt it," said Tony. He did not indicate Senator Clark, but his tone carried the implication that things were very wrong and that the other passenger was the cause of it. Then he said, "News here?"

"We've got a sound harness in action—on a rabbit," said the driver. "And Doug's got a picture-sound unit ready for test when we get that one back. But there's trouble. There was when I left, anyhow."

The car rolled on upon its oversized tires. The plume of dust rose from behind it. Senator Clark said sardonically, "Perhaps I should remind you that I can overhear what you're saying. Shouldn't you be more security-minded and not speak of classified subjects where I can hear you?"

The driver said, "Sorry, sir."

Tony said constrainedly, "Senator, this is Sam Creighton. He's one of our key men. One of the top ones."

The Senator snorted. The car went on beneath a brazen sky. The spot where Tony and the Senator had been picked up was as far behind as the horizon. In a little it was below the horizon. All the world was lifeless. The heat was intolerable. Clark looked at the canteen on the seat beside him, but was too angry to slake his thirst.

"I understand," he said coldly, "that this is a considerable enterprise. Isn't it wasteful to use a key man as a chauffeur? Do you use highly paid men for all such work?"

"He doesn't draw a salary," said Tony. "Nor do I. Nor most of the planning staff. General Kirk is officially retired. Doug—Doctor Phillips—draws a dollar a year. Sam, here, acts as chauffeur because it's rather important that communication with the world outside the project be extremely discreet."

Clark looked skeptical but made no comment. Sam Creighton reached under the car's instrument board and pulled out a microphone on the end of a cord. He spoke into it. It made unintelligible noises back at him. He slowed the car until the dust cloud behind it practically ceased. The car reached a place where weathered flat rock appeared on the surface. The driver swung to the left. At a spot in no wise different to all appearances from any other part of this sand-eroded stone. He stopped the car.

The ground fell away beneath it. It went down ten, twenty, thirty feet. The descent checked. It became apparent that here was a concrete shaft like a well, into which a part of the desert's surface had been lowered. The car rolled ahead and stopped again. Something rose behind it. It went up swiftly and closed the opening overhead. The car remained in an artificial cavern with large doors at one end.

"We're here, sir," said Tony.

The Senator got out of the car. He was not impressed. He looked about him and said sarcastically, "So this is what I've been brought to look at? An elevator shaft in the middle of a desert? Is there any more?"

“Yes, sir,” said Tony with forced patience. “Did you ever know a Doug—a Doctor Doug Phillips, sir?”

Clark said curtly, “I did. Years ago.”

“And a General Kirk? I mentioned him. General Heywood Kirk?”

“He wasn’t a general when I knew him,” said Clark. “Are they here? What are they doing?”

“They’re here working on what you came to see,” said Tony. “Like myself and some other people, they think that what we’re doing is worth all the money and the years out of our lives that we’ve put into it.”

2

HE LED the way through the large doors to an undecorated and uninteresting corridor. They walked for what seemed an endless distance along the curving, descending passageway. It was apparently dug through solid rock which here reached the desert's surface. In time they arrived at an elevator. In it they dropped a long, long way, past innumerable levels, of which some were brightly lighted and some were dark with masses of motionless machinery visible only because of the lights in the moving elevator cage. They reached the bottom. A guard stopped them. He nodded to Tony, but painstakingly watched while Tony put his hand on a glass plate, a light flicked on and off beneath it, and instants later a green light glowed beneath his fingers.

"You put your hand here, sir," said Tony politely to the Senator. "Your fingerprints were sent on ahead."

Clark said coldly. "What's this? I've been brought this far and you're still not sure of me?"

"It's the only way to get you through without sounding an alarm," said Tony. "I'm sorry, but that's the way it is."

Clark put his hand on the glass plate. Tony arranged his fingers. The flicker of light followed. Instants later the green light glowed and a door opened. Tony ushered Clark through.

There was more machinery. They came to a vast open space with a dome-shaped roof. As they crossed it on a soaring walkway they could see a hulking mass of metal, one of whose ends was pierced with innumerable holes, out of some of which metal rods extended to different distances.

"You've atomic power here," said Clark, frowning.

"Yes, sir. The idea is to have the installation entirely independent and able to work without power or supplies from anywhere else."

The Senator made a wordless, sardonic sound. They went on. They passed a huge engine room in which a giant steam turbine, spinning noiselessly, used steam from the atomic pile to supply the light and power requirements of the underground establishment. The generator seemed big enough to light and power a reasonably sized city. In fact, as they went along, this underground complex seemed more and more like a subterranean city, except for traffic. There was none. They saw few people. Once—this was well beyond the dome—they passed an

open doorway. A girl typed busily and matter-of-factly inside. But inhabitants of this place seemed to be relatively few. The population of machines, though, was impressive.

"I begin," said Clark with some grimness, "I begin to see that the devil of a lot of money has been put into this whatever-it-is. I thought it might be a few millions. Then I guessed at tens of millions. Now I suspect it is really big—and Congress knows nothing about it! There's going to have to be a powerfully good reason for putting the taxpayers' money into something as costly as this without Congressional approval!"

"We think the reason is good, sir," said Tony. "But it's true that Doug—that's Doctor Phillips, sir—has said we could all go to jail for what we've done."

"And it may be my obligation," said the Senator icily, "to see that you get there!"

"Quite possibly," admitted Tony. "But anyhow here's where we're going."

He pointed. There were two guards in the corridor ahead. One of them spoke into a telephone. When Tony and Clark arrived they were waved on.

"What?" demanded Clark ironically. "Is one check of my fingerprints enough for all guarded checkpoints? Isn't your security a trifle lax?"

"We've been on a TV screen in Doug's office since we came in sight," said Tony. "He told these guards to pass us."

He went ten yards down the corridor behind the guards. He turned a knob and a door opened into a startlingly commonplace office, to be hundreds of feet underground under a desert and scores of miles from anywhere. Doug Phillips stood up from behind his desk. He shook hands cordially with Clark.

"Fancy meeting you here!" he said amiably. "I'm glad you're the one picked to find out what shenanigans with government money some genius of an accountant uncovered! They could have sent somebody stupid. You're not that!"

Clark continued to frown. He said as if grudgingly, "We haven't seen each other for years, Doug. What we thought of each other then may be mistaken. But I shall keep an open mind. Still, it's going to take a remarkably good argument to convince me that all this should have been built and all this money spent without Congress knowing it!"

Doug nodded cheerfully, but Tony knew that his own expression had told of his pessimism about the prospects in Clark's visit.

“Fair enough!” said Doug. “Tony—see if you can find Kirk, will you? I think he’s in your section, trying to make sense out of our latest results. While you hunt for him I’ll take the Senator over the plant and expose our criminal activities.”

Tony went out. Doug could have summoned Kirk by pressing a button and speaking over a telephone. Obviously, the sending of Tony was to get Kirk briefed on the Senator and his attitude and the probable consequences to Project Tic-Toc.

He knew where Kirk would be. Kirk had been one of the three ranking generals in the Air Force when he applied for early retirement and then quietly vanished. He’d had a large share in the construction of Project Tic-Toc. He’d used strictly confidential orders by the executive branch of the government to hornswoggle contractors into believing they were at work on something relatively commonplace. Now all the money and all the years of work had arrived at the high achievement of controlling an object anybody could handle with two fingers. It was breathtaking to anybody who knew about it, but it was universal that the few who did would never admit that such a thing was even conceivable.

Tony went into the Tunnel chamber. Here was where the Time Tunnel was. He saw Kirk facing the open mouth of that highly improbable construction. It was a complicated assemblage of steel strength-members and copper busbars which seemed to—but did not—go from an incomprehensible mouth fifteen feet across, in the great vaulted room it had been built in, to an infinity of distance beyond. It was classified information so far beyond the top secret class that there was no word for its status. Not more than a dozen men—if so many—had ever seen it completed, and most of them had worked like laborers in putting its component parts in place.

Kirk stood staring into the Tunnel’s mouth. It was turned on, and every bit of metal in it glowed faintly with a wavering, flickering, bluish light. At one side of the Tunnel chamber there was an assembly of machine tools used when it was put together. There was a cupboard of prosaic appearance on one wall. Facing the tunnel there was a control desk at which sat Dr. Ann MacGregor, Ph.D. There were massive busbars and giant relay switches, and a relatively small computer at whatever places could be found for them.

“Kirk,” said Tony.

Kirk made an impatient gesture for silence. He continued to stare into the Tunnel which Tony always found dizzying to look at when the current was turned on. Its girders and busbars looked as if they had been spun by an insane giant spider using steel and copper to make a web instead of silk, and they glowed with a lambent bluish

flame. MacGregor said severely, “We’re very busy, Tony!”

“I’m just back from Washington,” said Tony. “I brought Senator Clark back with me. He’s out for blood because he’s gotten an idea of the scale of this operation and his committee in Congress wasn’t given full details in advance.”

Kirk waved his hand again impatiently, and said curtly, “Ann, how about the heartbeat?”

MacGregor adjusted a control on the control desk before her. She had an air of conscious competence, which Tony knew was justified. A faint throbbing sound, which Tony hadn’t noticed before, became louder. It went thumpa-thump, thumpa-thump, thumpa-thump.

“It’s in air, anyhow,” said Kirk relievedly. “Is it moving?”

“Coordinate four is changing. I think.”

She moved something, quickly. The thumpa-thump sound continued.

“I’m releasing it,” she said, “half a second and check, then another half-second and check. It is breathing. I think it’s going downward, somewhere.”

Now Tony noticed a travelling box such as is used for moving small animals from one place to another. It was floored with shredded paper. He saw fine white hairs. He guessed at a rabbit for its former occupant and immediately knew what was going on. A rabbit wearing a time harness had been put in the Tunnel. The place and motion of the harness should be controlled by the Tunnel. The Tunnel had moved the rabbit in its harness to what they called Out Yonder, for lack of a more precise term. The rabbit had gone into Out Yonder. Now they were trying to get it back. This was familiar enough. The throbbing sounds were undoubtedly its heartbeats and a new development. Project Tic-Toc was almost ready for its intended use. Now they could send things—Out Yonder. They had gotten some of them back; two or three out of hundreds. Now, with a signal being returned from the object Out Yonder, the chances of bringing it back were enormously increased. When they could do it every time all the labor and sweat and the infinitely dangerous preliminary work would be justified. There’d need to be only one more step and Project Tic-Toc would be operational. And if only nobody ever knew that it existed, it would be one of the great achievements of humanity.

“Doug wants you briefed,” said Tony, “on what Clark’s likely to say and do.”

“Never mind Clark,” said Kirk. “Ann, what gives?”

“I think,” said MacGregor, “that I hear wind in trees.”

Tony found that he could hear it too. With the thumpa-thumping

there now came the sound of the whispers of foliage. All the sounds came out of a battery of loudspeakers fitted upon the wall. They were new since Tony's departure for Washington, but they fitted into the scheme of things. There was a television screen newly set up, too, but its surface was blank.

The travelling box said rabbit. The thumpings would be its heartbeat, coming from the speakers that must be part of the sound pickup Sam Creighton had mentioned in the car. The rabbit was—Out Yonder, which was not an adequate phrase. It meant that the rabbit had been in the Tunnel, and had gone away to somewhere and somewhen, and they had a sound pickup of what it heard, and they could move it, but they didn't know which way it moved when they moved it, nor how far. And—most bafflingly—they hadn't yet found out which direction was which. Did coordinate four mean east or west or north or south, or did it mean up or down or sidewise? And relative to what? It was a familiar frustration to someone who'd worked on Project Tic-Toc from the beginning. There was even the possibility that coordinate four lined up with last Tuesday, or perhaps George Washington's birthplace. Anything was possible.

Kirk listened and stared into the Tunnel.

"The tree sound seems nearer," said MacGregor briskly. "I'm going to make it a quarter-second free fall and then check. The bunny can't get hurt that way. Not if the gravity's normal."

MacGregor evidently considered that the rabbit was somewhere aloft, off ground. Certainly it wasn't anywhere in the solid rock which hereabouts filled all of space up to the desert. Tony realized that if he blocked out his knowledge of what actually lay above and all around the Tunnel, he would consider that the rabbit whose heartbeats he listened to was being allowed to drop for a quarter of a second at a time and then stopped. The rabbit wouldn't be harmed by such small drops, and its velocity wouldn't increase in a series of them. Ultimately.

The sound of leaves was distinct, now, and nearly as loud as the heartbeats. There were other sounds. Then the rabbit touched something and scratched at it frantically. It was easier to picture the meaning of the noises with one's eyes closed. Then there was a tumble, and much rustling and struggling as if the rabbit had fallen into a pile of leaves and was fighting its way out of them.

"Coordinate four is no longer changing," said MacGregor crisply from the control desk.

Kirk continued to stare into the Tunnel. The rabbit's heartbeat went thumpa-thump, thumpa-thump. The rustlings as of disturbed fallen leaves ended. Kirk watched a moment longer. Then he turned aside.

“Let it rest a minute,” he said curtly to MacGregor. “Tony, what’s the bad news?”

“Plenty,” said Tony. He went through Senator Clark’s indignation over being refused advance information about the installation he’d come to see, and his frank distrust of Doug. The outlook was poor.

“I suppose,” said Tony, “he prides himself on his discretion and thinks he’s being insulted. I told him it was because he wouldn’t believe what we were doing until he saw it.”

“And possibly not then,” said Kirk wryly. “You know what we were just doing.”

Tony nodded. It was obvious. They’d sent a rabbit—in a time harness the Tunnel would control. This time it had a signalling device on it, so Ann might hope to trail it by the signal it emitted. For extra information they’d tried to modulate the signal with a microphone. They had better results than ever before, but still they didn’t know how to guide the rabbit back into the Tunnel. They could move it and its coordinates showed it was moved. But they didn’t know what the movements meant. Coordinate four, among other things, might mean up or down, and therefore would change as the Earth revolved, if where it was was a normal Earth. But it could mean the direction of Old Faithful in Yellowstone Park, or the space-time angle of the Fourth of July Project Tic-Toc. When they moved something Out Yonder, it might go inches or parsecs.

“Of course I know,” said Tony.

“Then we’ll go on and to blazes with the Senator,” said Kirk. “We might get this job done in three minutes or never. But we’ll keep on trying. Ann?”

MacGregor nodded. She turned up the sound again. The thumpa-thump, thumpa-thump of the rabbit’s heartbeat returned to full audibility. There was again the rustling of leaves. Then the door of the Tunnel chamber opened. Tony swung sharply. One didn’t ordinarily get into this place without authority from inside.

But it was Doug Phillips and Senator Clark. Doug looked annoyed. Senator Clark glowered like a thundercloud. Kirk, at the mouth of the Tunnel, said, “Hold everything, Ann.”

He made a gesture of greeting as the noise dropped nearly to zero. Senator Clark said in even, measured tones, “I take it that this is the center of this—ah—project? This is where it functions?”

Kirk nodded. Doug grunted affirmatively. MacGregor waited at the control desk. She regarded Senator Clark with acute suspicion.

“Yes,” said Kirk. “This is it. That’s right.”

Clark stared at the massive, irregularly glowing structure of steel

and copper.

"I'm told," said Clark ominously, "that this is a time-travel device."

"You might call it that," said Kirk. "We aren't fanatical about making a trip to yesterday, but that's one of the things—one of the minor things—it should make possible when it's working."

"And you've spent some hundreds of millions of dollars of defense money—of taxpayers' money!—on this insane thing! Do you realize that you've been guilty of treason?"

"I don't look at it that way," observed Kirk.

"Doug insists," said Senator Clark, his voice trembling with indignation, "that you're not traitors; that only he is officially in government employ and you've done nothing for any foreign nation. But you've bled your country's treasury of uncountable sums to attempt something any schoolboy could have told you was impossible! That's treason in my book!"

"We know a little more about the matter than most schoolboys," said Kirk pleasantly, "and we don't agree with your hypothetical student. For example—"

He glanced at MacGregor. She turned up the sound. There was once more the muffled thumpa-thump, thumpa-thump of the rabbit's heartbeat, amplified until it was louder than that of an elephant. There were rustling sounds.

"We took a rabbit," said Kirk, almost casually, "and put a time-travel harness on it, by which it could be moved, and a signal generator which included a microphone by which it would report. We put it in the Tunnel, here, and moved it Out Yonder to—somewhere or somewhen. Somewhere where in order to be at all it also has to be in somewhen. That rabbit is not in the moment we call now. It's in some other moment—perhaps weeks, possibly months, conceivably centuries from this particular day, hour, minute and second. And it's obviously removed both in space and time, we don't know how much. To this degree, what you see is a time-travel device. But—"

Clark made a sound equally expressive of indignation and disgust.

"You won't expect me to believe that!"

"We may be able to prove it," said Kirk amiably. "Any moment."

"But before you try," said Clark fiercely, "explain something to me! It's admitted that this device is intended to provide time travel."

Doug interposed.

"It is," he said doggedly, "but it'll be more than a way to travel in time. It has to be that before it can do what we want, but—"

"You believe it will take a man into the past," said Clark with increased grimness, "and that he can live and move and act in the

past?"

"A mouse has done it for a while. A rabbit's doing it now. Why not a man?"

"You've still to prove that anything's done it!" snapped Clark. "It's philosophically impossible! Suppose a man went into the past—as you say he can—and killed his grandfather when his grandfather was a child. His father would never be born. He would never be born. How could he go back in time and kill his grandfather?"

"That," said Kirk drily, "is a matter to be investigated if or when it happens. The real question is simply, can a man travel in time? If he can, he can. If he can't, he can't. We're betting that he can."

"Then I ask another question," said Clark. He was angry all the way through. "I have a son who reads science fiction. Out of curiosity I read one of his books. It poses my second question. The state of things in the present is the result of things that happened in the past. The United States exists because colonists crossed the ocean and settled in the New World years ago, because later they fought the American Revolution—years ago. I flew here because men invented flying machines—years ago. The present is always the consequences of the past. Am I right?"

Tony shook his head to himself. Clark was raising a question whose perfectly valid answer he would never accept.

"The question you intend to ask," said Kirk, "is familiar."

"I'll ask it!" said Clark sternly. "If somebody from the present did go into the past and did anything having appreciable results—however trivial they might be—he would change the past on which the present depends. Imagine the past changed! Suppose George Washington had died of smallpox! Suppose Edison's mother had married another man! Suppose Morse had travelled on another steamer! If a man went into the past—which Heaven forbid!—and he changed the past, he would change the present which derives from it. Only Heaven knows what would happen! You might vanish like a blown-out candleflame because in the new past one of your ancestors died out of the sequence of events on which you depended. Our cities might become empty swamps because in the new past somebody did not invent explosives to quarry rocks with. Millions of us might cease to exist because somebody among their progenitors died of disease instead of begetting them! Our fathers and mothers might become phantoms—phantasms. They might never have been and we might never be! And this you would inevitably bring about."

"Not inevitably," said Doug doggedly. "In fact—"

"You shan't do it!" said Senator Clark fiercely. "If Heaven is good you could not! But you must not even try! The thought is monstrous! I

don't how you represent this to your consciences, but if there is a crime so great as to be unforgivable, you plan to attempt it! But you shan't accomplish it! I go back to Washington, and when I speak to the Congress about this unspeakable plan—"

"I wish," said Kirk, "that you wouldn't be quite so much of an idiot, Clark. If what we're attempting to do leaked out, how many other nations would try it too? And how many might accomplish it? There could be no more deadly treason, Clark, than simply shooting off your mouth about Project Tic-Toc!"

"Why did you start it?" demanded Clark. His eyes burned. "Why? What could it be but—a will to blasphemy? What but an attempt to upset all the laws of nature?"

"It could mean," said Doug as doggedly as before, "that there need be no more wars. Our civilization could stop being in danger of suicide. A man like Hitler, who threatened the world, could be kept from coming to power."

"It shouldn't be tried," cried Clark, fiercely. "It shouldn't be attempted! It shouldn't even be thought about!"

Tony swallowed. He was about to speak in what he knew would be only words—useless words—but MacGregor sat up with a jolt at the control-desk. She cried brittlely.

"General! Doctor Phillips! The heartbeats! They're changing!"

She raised the volume of the sounds from Out Yonder. The noises of wind and forest came back. The out-yonder rabbit still breathed. Its breathing could be heard. But the tempo of the heartbeats was faster. The heart pounded in a runaway, "Thumpa-thumpa-thumpa-"

Then a bleating high-pitched bellow, of the volume of a fog-horn. Incredulously, Tony knew that he'd heard the death-cry of a rabbit amplified beyond recognition. Kirk was staring back down the length of the tunnel, his hands clenched. Doug watched the same spot, his features twisted in an unconscious grimace. Senator Clark was startled and shocked by the dismal, deafening outcry.

The heartbeats, pumping furiously, became less loud. They slowed, and jerked to violent beating again—and stopped.

"Something got the rabbit," said Kirk. "Maybe a wildcat, if there are wildcats where it was. The heartbeat changed when the rabbit knew it was being stalked. It's dead."

Senator Clark had been shaken. Now there were other sounds from the loudspeakers. They were gobblings, magnified to pure horror by the amplifiers. Kirk snapped, "Ann! Pull it away! Pull it—"

MacGregor turned knobs swiftly. There were no other throbbings. There were no sounds of leaves. There was no sound at all from the

speakers.

Kirk shouted, “I saw it! It was through the Tunnel, Ann! Hold everything!”

MacGregor flipped switches and adjusted controls with an air of desperate earnestness. Suddenly she stopped, staring at the dials before her.

“It’s held,” she said, her voice trembling. “I’m sure I’ve got it, General! But it went past now! It’s in the future! I have it stopped.”

“I saw it pass through the Tunnel,” said Kirk feverishly. “It was in the Tunnel for the fraction of a second. Then—it was gone!”

Senator Clark said with a fine skepticism, “Was it headed into the past or the future, Kirk?”

“It’s a guess—” Then Kirk realized that Clark was making a mockery of what he thought an attempt to deceive him. Kirk snapped, “Damn you, Clark! This is real!”

MacGregor turned a single knob in the control desk array with an agitated, desperate precision. She glanced at a dial from time to time. She said in a strained voice, “It was—moving almost parallel to coordinate four when it—went across the Tunnel. I stopped the movement, but not quite soon enough. Now I’m reversing it. I’m bringing the rabbit—I think—I hope—back along the way it passed. It should be in—the future—and if I can—get it back to—now …”

Tony stared into the Tunnel. Kirk watched, his hands making useless, urging gestures. Doug clenched his hands, his eyes staring at the girders and busbars and the emptiness in the Tunnel’s center.

Then something appeared there. It was present for so brief an instant that it did not seem solid. It had at once the distinctness and the unsubstantiality of an electric fan in motion. It was gone again before any of the three could call out. But MacGregor had seen it from her control desk. Her face showed an absorbed, strained tenseness. She ceased altogether to wear the look of being looked at which is the normal expression of women, underlying looks of joy or grief or anything else whatsoever. She said in a half-whisper, “I know—what the dial said. Careful … wait … wait …”

Then there was a simultaneous exclamation from Tony and Kirk and Doug. There was something in midair in the Tunnel. It disappeared, and MacGregor labored over one control only, and presently it reappeared, fading into near-solidity and fading out again. But then it came back to full reality, and wavered, and suddenly was a solid thing. MacGregor threw off the main switch in a sort of agony of responsibility. A humming sound they hadn’t noticed lately cut off. All the lights glowed violently brighter for the fraction of a second. Then the wavering bluish glow of the Tunnel vanished—and the thing in

the Tunnel dropped to the floor.

Tony went in after it. He brought it out. It was a rabbit; a white and black rabbit much larger than its wild kindred. It was dead. Something wild and deadly to a rabbit had killed it. A few drops of blood fell as Tony held it out.

They saw it. Then, painstakingly, Tony unstrapped a miniature harness from its body. The harness had extra straps. Something electronic, with a tiny and peculiar antenna, came away from one of the rabbit's flanks. There was a minute microphone. That was all.

Silence. Clark looked suspiciously from Tony to Kirk to Doug. Then he said harshly, "This may or may not be hocus-pocus—this particular demonstration. But you are trying to make it real, at least. But the reality would be the most monstrous, most blasphemous, most horrifying event that could possibly happen on Earth! If this rabbit did go into the past and there was killed, or whether it went into the future to be murdered,—it must not be duplicated! The attempt must not be repeated! The thought must be forgotten! I would feel murder justified to stop this enterprise! And if I have to describe this in full Congress, to wake the world to the destruction you would bring upon it—I will do so!"

Tony took a deep breath. Kirk and Doug looked at each other.

"It seems," said Doug in the grimmest voice Tony had ever heard. "It seems that that's that. Eh?"

3

THEY'D GONE away, Senator Clark and Kirk and Doug Phillips. Tony stayed in the Tunnel chamber. Only he and MacGregor remained. The Tunnel chamber seemed somehow depressed and dead without the soft humming of an infinitely powerful energy source in operation and without the bluish flickering glow from each of the Tunnel's grid members to make it seem somehow alive. MacGregor raged suddenly. A man could feel moved to homicide, if he felt the importance of the thing that was to be forbidden and contemplated the destruction of Project Tic-Toc by the actions of the chairman of a Congressional committee. A man might decide to take desperate measures to prevent that debacle. But he would be calm because he wasn't involved in the project for any benefit to himself. He would gain nothing in reputation or money. But for the knowledge that he'd shared in the one achievement which—if it were never known—would at least serve and might save humanity. Most men would do murder for such an end. But they wouldn't be enraged.

But MacGregor was. Her face was crimson with anger. She was speechless. She drummed on the control desk before her, panting for breath.

Tony said, "Where's the sound and picture harness Doug had gotten ready to check out when the rabbit experiment was finished?"

MacGregor panted, "I—I could kill that Senator Clark! I could kill him! I—could—kill—"

"Let's not kill him," said Tony. "Let's convert him."

MacGregor dissolved suddenly in tears. A wise man once said that a woman's tears are often little liquid cuss-words. They relieve frustration and are a substitute for revenge. A weeping woman never commits a crime. MacGregor sobbed hopelessly. Tony said again, "Where's the sound and picture harness to be used after the rabbit business was finished?"

"What's the difference?" MacGregor continued to weep.

"It comes next on the schedule," said Tony matter of factly. "We had to be sure that things could be sent off into time. We did—some hundreds of them. We had to know they could come back. They have —two or three of them. We had to find out if life was possible where they went. The rabbit proved it, sending back sounds before something killed it. The next job is to find out where they go and how

to move them to where we want them to go, with the Tunnel in charge of their travelling. We have that still to find out before we can use the Tunnel for what it was built for. Personally, I think the prospects are pretty good."

MacGregor looked at him with her eyes swimming with tears.

"Doug—Doctor Phillips will be heartbroken!" She wept again. "It's his life, the Tunnel is! He'll have nothing left …"

Tony shrugged his shoulders.

"Where'd he build the harness?" he asked impatiently. "In there?"

As a matter of security, top-secret equipment for Project Tic-Toc was always assembled in the Tunnel chamber, to which very few people had ever been admitted since the Tunnel itself was set up. Some things had actually been made there, as a small group of machine tools in one corner showed. MacGregor did not answer. She wept.

Tony went to the cupboard behind the set of machine tools. The cupboard wasn't locked. Nobody with less than ultra-high-security clearance could get into this cavernous room. So Tony matter of factly opened the cupboard and reached in. He drew out a mass of harness-like equipment which for a moment puzzled him. Then he saw that it was not one harness, but two. He examined them. One was exactly as the preliminary design had intended. The other was a trifle more simplified and perhaps more efficient. Both had one marked improvement over the miniature harness for the rabbit. Each carried a pencil-sized picture tube and would transmit a picture as well as voice and sound data back to the Tunnel. But neither had been Out Yonder. They'd been scheduled for use after exhaustive experiments with the miniature.

Now Tony held the two of them in his hands. He chose one—the latter—and thoughtfully jangled the mass of straps and equipment in his hand.

"You realize," he said reflectively, "what Doug's going to do. He intended to make the first journey Out Yonder himself, in this."

MacGregor sniffled.

"Now he'll never—"

"To the contrary," said Tony, "he's sure to! After all, Clark has to build a fire under us. We've a little while before the kindling catches. Doug won't waste a second of it. Before Clark's even back to where the copter will pick him up, Doug will be Out Yonder in this harness, where the rabbit was killed. And you'll be handling the controls."

The anger faded from MacGregor's face. She paled.

"No! No! I couldn't do that! After thorough tests, perhaps, because I

am good at these controls. But not—"

"You shouldn't do it," said Tony judicially. "But nobody else is as capable as you are with the controls. Doug will have to call on you. And you'll have to do it."

MacGregor was frightened. Pure terror shone out of her eyes, so recently wet with tears because Doug's whole life's work was to be frustrated and he'd have nothing left to live for. He wouldn't think of her.

"I—couldn't do it, Tony," she said desperately. "I—I think you're right. With the Tunnel so near—operating, he will want to take the chance. He'll want to do it—But I—couldn't take his life in my hands!"

"Precisely," said Tony. "So we put something over on him. For his own good. You'll set the controls to send something out of the Tunnel, and you'll set them for the place the rabbit was—where there's air to breathe. For that place and that time. So they can see it when they come back. And then you'll go bring them here. You'll tell Doug and Kirk and Clark—don't forget Clark!—that I've gone Out Yonder. And then Clark will have to get me brought back—which will prove the Tunnel works—because he daren't risk a man from our time, with what I know, in the past he considers I'd surely change."

MacGregor trembled. Tony said, "Clark's happy plan to take an axe to Project Tic-Toc will have to be postponed. And we'll have a little time to think and do something practical before Clark starts to kill the whole business. You see? Set the controls, Ann, and then go find Clark and Doug and Kirk—and I'll take charge of everything else."

"I—I don't see that it can do any good," quavered MacGregor, "But it shouldn't do any harm. And with time to think—"

"Right!" said Tony encouragingly. "Find them and say I've gone a year of yesterdays into the past. Because the Tunnel's to be scrapped."

She set the controls. She hesitated. Then, still almost decided not to do it, she went out the Tunnel chamber door. Instantly it had closed behind her, Tony moved quickly. He put on the harness. He buckled its straps with feverish haste. He turned on the signal unit and spoke into the microphone. Instantly his own voice bellowed from the battery of speakers. He glanced at the TV screen. It showed the interior of the huge room as Tony saw it. It presented an image of itself as final proof that it was operating. He snatched out a roll of adhesive insulating tape and peeled off yards of it. He fastened the end to the main switch on the control desk and moved more quickly still to the Tunnel. He entered its gaping open mouth. He stepped quickly upon the first steel girders, avoiding the copper ones. Presently he reached the spot where the rabbit had reappeared. He considered a moment and hastily stripped off his coat and put it back

on, concealing the harness to a great degree. He tested the microphone again, and his voice rumbled once more in the cavern like room. He saw that images of the Tunnel showed on the television screen. He took a deep breath.

He pulled on the tape that went out of the Tunnel and to the control desk. The master switch resisted. He pulled more strongly. Then, suddenly, it snapped over.

There was a crashing sound, with the quality of thunder. There was a humming murmur as of infinite power rushing to do its work. The steel and copper bars of the Tunnel began to glow with a soft, bluish, pulsating light. Tony's voice came from the speakers.

"Ten. Nine. Eight. Seven. Six. Five—"

The door fairly burst open. Doug rushed in, with Kirk crowding him closely. Senator Clark, raging, came after the others. MacGregor came last, definitely pale.

The Tunnel was empty. Tony's voice came from the battery of loudspeakers. "… Four. Three. Two. One."

An image formed on the television screen. It moved jerkily as if the picture tube which transmitted it were moving. It was. The image was not conceivably that of any part of the Tunnel chamber or the Project Tic-Toc installation or the desert above it or—

"I don't know," said Tony's voice, reverberating in the Tunnel Chamber, *"if anybody's listening yet, but I can report that the Tunnel works, and that I'm still alive, and that I'm somewhere and somewhen which seems to promise very well for what we built the Tunnel for. In fact —"*

Doug's face was chalky-white. Kirk swore softly under his breath. They stood motionless, appalled. Senator Clark panted, in part perhaps from following the others in such haste to get here, but certainly in part from a despairing rage that everything he'd come to fear, and everything he'd passionately resolved must never be allowed to happen, was now a fact.

Tony's voice boomed in the Tunnel chamber again, *"Now—what the devil?"*

Tree branches waved on the television screen. The rustling of leaves was distinct and loud. Tony's voice came again, *"This is—it's queer!"*

4

IT WAS very queer indeed, because there was nothing peculiar in anything that Tony could see around him. There were trees all about, but they were of wholly familiar kinds. There were pines, and oaks, and beech and birches. There were leaves and pine-tags underfoot, and brushwood. Timberland had been cut over and a second stand of trees was growing. There was the smell of wetted fallen leaves. He could see sky in patches, and it was either late afternoon or midmorning here. More, there was weather in the clouds he could see. There were areas of blue sky, but also there were clouds, and in one direction—he could not name it—there was a solid sullen cloud bank which spoke emphatically of rain.

The ground sloped downward. There were small gullies only inches deep but freshly eroded. The state of vegetation indicated late Spring, though in Project Tic-Toc the calendars said August. Tony stared about him.

It was preposterous that only tens of seconds ago he had been in the Time Tunnel chamber, under a thousand feet of solid stone, with pure desert wasteland atop that on which not even sagebrush grew. He could have been transported to anywhere. Anywhere! But for the destination he'd assigned himself, which was wherever a black-and-white rabbit had cried out despairingly when it was killed—if he hadn't assigned himself a destination where a rabbit could breathe, he might have expected to be thrust out of the Tunnel into empty space or intolerable solidity; into the molten central depths of the Earth or into empty space between Earth and moon or even into nothingness so remote that the sun itself would be a faint and feeble star.

But here there were bird calls. Here was tranquility. The feel of things, the atmosphere, was so far removed from any reason for disturbance that Tony felt almost embarrassed. In the Tunnel chamber it had seemed that almost anything was distinctly more than likely to happen. He'd braced himself for the strange and remarkable; for at least something to be faced. But he was standing in an area of second-growth timber, of tree varieties every one of which he knew and whose smells, even, were totally familiar. He felt as if he'd gone back into the years when he was fifteen or thereabouts, and that this patch of woodland was only a mile or so from the town he'd lived in back in those days.

The idea was startling. He looked down at his hands and clothing,

and was relieved. His hands were a man's. His garments were what they ought to be. The Tunnel hadn't sent him back to his own childhood. He was himself, completely himself and retaining the changes the years had brought about.

He made sure the microphone was turned on.

"Well," he said with careful nonchalance, "here I am."

Instantly a voice came back to him. It didn't come through his ears. He wore a tiny bone-conduction receiver his hair or a hat would have hidden. But he hadn't been wearing a hat in the Tunnel chamber, so he wasn't wearing one now. The voice he heard was Doug's.

"You're a fool, Tony!" said Doug with some bitterness. *"Why the devil did you do it?"*

"Somebody had to," said Tony, standing in a young forest an unknown number of miles and years away. "If I hadn't done it you would. Senator Clark is mistaken. This is the only way to prove it. It has to be proven. Project Tic-Toc is too important to be scrapped because he has some mistaken ideas of what it could mean."

Senator Clark's voice came, but behind the anger there was a desperate anxiety.

"I appeal to you," he panted, *"to do nothing until you're brought back! I order you! I command you to do nothing that will change the present from where you are! I speak for Congress! I speak for the government! I speak for the nation! Be still! Do nothing! Every effort will be made to bring you back to your proper time! But you must not change it!"*

Far and far away there was the hooting, resonant sound of a locomotive whistle. It was a steam locomotive. But in the time of Project Tic-Toc's beginning, there were no more steam locomotives. There were Diesels, and there were electrics, and there were turbine-driven ones. But there were no more locomotives in use with mournful steam whistles like this one. Tony knew that it was blowing for a crossing.

"I'm back in time, not ahead," said Tony abruptly. "Did you hear that whistle?" He didn't wait for an answer. Instead, he said, "Ann, make a record of the dial readings! Steam locomotives are in use here and now. The odds are that I'm in North America. Foreign engines' whistles didn't sound like that! I'll be probably between 1875 and 1940. When we identify the coordinates, we've got that for a mark on the time scale!"

Doug said unwillingly, *"Stay where you are, Tony. We'll try to get you back. Don't do anything!"*

Tony shrugged. He knew what was going on in the Tunnel chamber. MacGregor—probably with shaking hands—would be setting the

controls to try to return him to the time he knew and had lived in. She'd brought back the rabbit. There'd be proof that the Time Tunnel worked. Those who were entitled to know about it would see that it would be the most appalling of mistakes to cancel out Project Tic-Toc after it reached a stage where it was known to be practical. They'd prevent the cancellation somehow. Maybe they'd persuade Senator Clark that it was abandoned. But it wouldn't be.

Insects made noises in the perfectly ordinary woodland in which Tony stood. He was out of his proper time. He was out of his proper place. He was an example of the impossible achieved: travel through time. The most imaginative of prophets had never seriously suggested that men might ever travel in time. It was totally impossible, but it didn't feel that way. It didn't even feel exciting. Tony's sensations were simply those of somebody, anywhere or anywhen, standing in a patch of second-growth woods with birds singing and insects whirring and stridulating and—yes. A mosquito whined beside Tony's ear. He slapped at it and then considered uneasily that if he killed a mosquito here he might somehow be changing the future. On the other hand, if he let it bite him no less portentous results might follow.

But that was Clark's idea. Tony firmly did not believe it.

A voice in his skull, again.

"We're going to try it, Tony!"

Tony spoke to the trees around him, "I'm in no hurry, but you can go ahead."

Seconds ticked by. Then, suddenly, intolerable sensations swept over him. All his muscles and every nerve seemed to jerk, to twitch violently. There was an unbearable feeling of stress, as if he were being simultaneously pulled at from innumerable directions. His breath left him. His head suddenly hurt horribly, as if blood had rushed into it and was now attempting to burst it.

Abruptly, the sensations ended. He barely caught himself in the act of going down to the ground as his knees gave way beneath him. He caught at a sapling to steady himself.

"Tony! Tony!" It was Kirk's voice, desperately anxious. *"Are you all right? It didn't work! How are you feeling?"*

"I'm not sure," said Tony. "Something gave me the devil. I don't know what." He paused. "Unless it was the Tunnel I want to move. It feels like there's something wrong here."

Silence for a moment. Then he heard murmurings. Clark's voice, cracked and higher-pitched than it should have been. Doug's, suddenly very firm and harsh. Tony couldn't select the words from the dim babbling. Doug apparently took charge.

"Tony," he said anxiously, *"you're probably exactly where the rabbit was. Maybe a place from which something has been jerked into time is affected for a time by what happened. As if it were scorched or magnetized or something like that. Some physical property changed. If it feels wrong, move out of it."*

Tony moved ahead. Downhill. He felt better. He said so. He heard MacGregor speaking.

"We can tell that you moved," said Doug's voice after an instant. *"And you say you feel better. We can tell you how to get back to where you were if need be. But something hit you hard! We want to check things before we try again to bring you back. We want to find out what happened."*

"Since you can track me," said Tony, "and guide me where you want me to go, maybe I can move around enough to find out where I am. And when. I needn't be seen and we need the information."

Another pause.

"We're going to check the Tunnel," said Doug. He was worried. *"Keep out of sight!"*

Tony nodded, though back at the Tunnel they couldn't know it. He moved ahead, down the gently sloping ground. There was a fallen tree. He scrambled over it. He saw a larger gully where several surface rivulets had joined to cut a channel all of a foot in depth. He found himself on a definitely sloping hillside. Back at the Tunnel the television screen would be showing the trees and the sky and brushwood, but in wild sweeps because of Tony's movements.

He saw water ahead. It was a lake, surrounded by tree-covered hillsides. Tony went on down to its edge. It was possible to see the sky more clearly from there. And somehow now he knew that this was morning, not afternoon. He guessed at eleven-thirty o'clock, half an hour before midday. It was a very pleasant, very pretty lake. He estimated its width here at a mile, and it would be all of four miles long, or possibly even five. He saw no life on it, save that above its surface darting small birds flew about their private business. Then a fish jumped, yards from the shore.

He noticed an oddity about the lake's shoreline. There was grass to the water's edge and below it. He saw bushes growing out of the water. The lake was evidently at a higher level than ordinary. This was the only peculiar thing to be seen anywhere.

But such ordinariness was somehow disappointing. It was not an appropriate cosmic reaction to the most stupendous achievement of mankind—the Time Tunnel. Because of it, the theoretic possibility of a world actually run for the benefit of humanity might be brought about! Nature, however, did not seem to recognize this remarkable fact. Small, wind-made ripples moved obliviously over the lake's

surface, and birds flew about as if grocery shopping, and cloud masses moved overhead as if deliberating whether or not to dump down more rain upon an already-saturated landscape.

It was disappointing. Tony saw a formerly unobserved building on the far side of the lake. It was too close to the level of the water. There had been a pier out from the shore for small boats to tie to. The platform of the wharf was submerged. The boathouse sidewalls were in the water, not above it. But Tony saw no humans.

Then he did. There were men working at something not clearly visible at the end of the lake shore, which somehow did not look exactly natural for a shoreline.

Tony spoke to the air around him, knowing that Kirk and Doug and Clark and MacGregor would overhear him.

"I'm going over there, where I'm pointing the picture tube. I won't show myself, but I'll get a look at this season's styles for men at work and maybe find out what year it is."

In the Tunnel chamber somebody said something murmurous. It was odd to reflect that if he'd travelled in time—and he had—that Project Tic-Toc did not now exist anywhere on Earth. The enormous, complex excavation containing an atomic-power pile and miles of corridors and uncountable machines; the staff quarters and the mess rooms and the recreation areas—all the ingenious devices to keep the Project hidden simply weren't. Not yet. Not where Tony was.

He moved along the lake front. He felt cheerful. The overwhelming commonplaceness of his surroundings kept him from having any misgivings of any sort. He knew the abilities of Doug and Kirk. If any thing needed to be found out or corrected in the Time Tunnel, they would attend to it. It occurred to him that his clothing might look peculiar if anyone saw him, but there was no need for him to show himself. He would want a meal presently, but that could doubtless be arranged. After all, if first a rabbit and then himself had been transported from the Tunnel chamber to here and now, sandwiches could be transported too. He was being watched over. The television screen at the Tunnel showed everything he saw, on a screen beside the Tunnel mouth, and his harness microphone reported every sound he made or heard. He felt that he had nothing to worry about.

Even Senator Clark was more or less under control as an enemy of the Time Tunnel. With proof that the Tunnel worked and did not produce the frightening consequences the Senator foresaw, he'd either be convinced or high authority would see that he was somehow sidetracked. He might be told that the Project would be used in a fusion-bomb explosion test, and such a test might be made, and the Senator would be convinced Project Tic-Toc was finished. But it would

actually continue to exist some fifty or a hundred miles from the place of its supposed destruction.

Meanwhile Tony went along the lake shore. It was curious that he felt so completely normal. He felt at home.

He was almost at the end of the lake. He moved a little farther into the woods to avoid being seen by the workmen. He heard a steam locomotive whistle again. It went *"Whirooo! Whirooo!"* in a wildly wailing fashion that Tony had only heard before in period motion pictures. It was nearer, now. He heard this time a deep-toned rumbling and grumbling sound which would be the wheels of a railroad train rolling over the jointed rails. The whole body of sound seemed to echo faintly among the hills. It went gradually away.

A little later he heard the thin sound of voices. He couldn't make out the words, but somebody was giving orders to the workmen he'd seen, and other voices replied.

He moved to see what went on; for information needed to get the Tunnel calibrated so it could thrust an object not only into time, but to a predetermined moment, and not only into space, but to this specific spot or that. Suddenly he could see everything.

There were not less than thirty or forty men trundling wheelbarrows, carrying bags of earth to build a rampart against the waters of the lake. They moved upon the top, the crest, of an earthen dam which obviously created the lake. There was a sluice to regulate the water level. It should be letting water by thousands of gallons a minute run down into the valley beyond it. From there the water should go down an almost straight drainage ditch carrying it away down the valley. The workmen labored in a leisurely fashion, building a levee atop the dam's crest. Evidently the sluice was not draining off enough water to keep the lake level from continuing to rise. An earth dam is safe enough, under proper conditions, but if water ever begins to flow over its crest an emergency immediately exists. These workmen were making a retaining wall of sandbags. There were men filling them with earth, and other men trundling them to the dam, and other men placing and pounding them to make as nearly water tight a wall as possible. They worked steadily, methodically, leisurely.

The bottom of the valley below the dam was a good hundred feet lower than the lake's surface. Tony could see the angle to which the embankment had been built up. It was not an unduly gentle slope. He considered that he wouldn't like it unless there was a curtain-wall of concrete somewhere to prevent seepage. But still it seemed less massive than a hundred-foot head of water would call for.

The workmen worked without haste while a foreman paced back and forth, puffing on a black cigar. Tony saw him help a workman get

his wheelbarrow going again when it bogged down in mud. The sandbag wall was already two bags deep and two high. They were adding a third layer. But the water was already within a foot or two of the crest.

Tony peered through brushwood. He made his reports in a low tone through the microphone under his coat lapel.

"They're heightening the dam with sandbags. I think you can see them," he said quietly. "There's evidently been a season of heavy rains here. The water is pretty high."

Kirk's voice said somewhere in his skull, *"What do the men look like? What are their clothes like?"*

Tony said in the same low tone, "Flannel shirts, it looks like. Their shoes are—I've never seen anything exactly like them. They're a kind of boot. Some of them are smoking pipes. They're clay pipes! One of them has put down his wheelbarrow to light up." Then he said sharply, "He struck a match on the seat of his pants! It's an old-fashioned lucifer match! When did strike-anywhere matches go out of use? Where I am they're still standard!"

"Have to check on it," said Kirk. *"It's not recently, anyhow. Doug's checking the Tunnel to see about bringing you back."*

"The foreman," added Tony, "is wearing a derby hat and a vest. The vest is fancy-striped, I think. The shirt is pink. No coat. He's wearing sleeve garters."

Kirk's voice, *"Somewhere around 1900, most likely. Doug hasn't found anything wrong with the Tunnel yet."*

"I'm all right," said Tony. "Look, Kirk! I think I see a horse tied up near a wagon. The workmen may have left their coats and lunches there. And some of them might be wrapped in newspaper. I could get a date and place from a sheet of newspaper!"

"You don't want to be suspected of stealing a lunch," said Kirk drily. *"Be careful!"*

Tony grinned to himself. In surroundings so familiar, and with confidence that even Clark should accept the facts he'd demonstrated, he felt a deep satisfaction. He'd done something that had been needed for the continuance of Project Tic-Toc. He'd get no reward, but knowing it was enough. Meanwhile he was not worried. He anticipated no worries. It was only amusing to have before him the task of squirming, Indian-like, through brushwood to steal a bit of newspaper that a workman on the dam might have wrapped around his lunch.

He made it. Once he had to stop and detach thorns from a prickly vine from his clothing. Once he heard a startled voice inside his head.

It was Kirk, who'd seen something through the tiny picture tube attached to the time-harness.

"That's a jack-in-the-pulpit!" said Kirk. *"It's a May flower! And it's August!"*

"Such things," said Tony, "prove the extent of the Tunnel's range. Not only years, but seasons get gaily skipped when the Tunnel does its stuff!"

He crawled. For ten feet he was completely hidden by a large fallen tree. Then he was at the edge of a wagon trail which came from somewhere to the top of the dam. There were two wagons, but only one tethered horse. The workmen's coats were in the wagon. Also their lunchboxes. But there were a number of parcels that were obviously sandwiches wrapped in newspaper and tied with string.

To avoid showing himself Tony fished for one of them with a long-dead branch he pulled out of high grass. He got its twiggy end under the wrapping string and swung it out of sight. He untied the string. There was a double wrapping of newspaper, and he took the outer one which was a front page. He rewrapped the thick meat sandwiches neatly back again. He replaced the lunch where it had been.

He backed to full concealment, with his prize tucked into his pocket. Minutes later he was well away from the lake and the dam and the wagon road. He opened the sheet with a fine sensation of amused triumph.

"Kirk," he said in a low tone to his coat lapel, "I got a newspaper page. I've got a place and a date that's surely not more than a day off the actuality."

It wasn't Kirk who answered by the bone-conduction headphone. It was Senator Clark. His voice sounded racked. He believed now that time travel was possible, but he considered the achievement a certain source of illimitable disaster.

"Were you seen?" he demanded agitatedly.

"I wasn't. And the newspaper page will never be missed," said Tony soothingly. "Want to hear the news?"

Senator Clark made an inarticulate sound. Tony said comfortably, "The paper's the Johnstown *Argus.* The date—it will be yesterday's paper—is May 30th. And—hold your hat! The year is 1889! I won't be born for fifty years!"*

*(The events which follow actually took place May 31, 1899. —M.L.)

He heard a noise in the receiver against his skull. It was an alarming noise. Senator Clark had evidently turned from the communicator in the Tunnel Chamber in such excessive agitation that the others dropped all other matters to tend him.

Tony's jaw dropped. Then he frowned. It couldn't be helped if the operation of the Time Tunnel distressed the Senator. Clark was mistaken about the meaning of the Tunnel. He'd find out ultimately that what he'd tried to prevent was not catastrophe. Meanwhile—

Doug's voice came. It was changed. It was appalled.

"Tony! Did you say Johnstown, Pennsylvania? And did you say May 30th, 1889? And it's yesterday's paper?"

"Yes," said Tony, puzzled. "It's Pennsylvania, and it would hardly be today's paper wrapped around a lunch. Yesterday's would be more reasonable. Why? What's the matter?"

Doug's voice sounded as if his throat were dry, and as if he was shocked and bewildered and wholly helpless to adjust to some situation he saw, but Tony didn't.

"That dam you're looking at—it's upstream from Johnstown, Pennsylvania. It's going to break today. You've gone back, Tony, to the time and place of the Johnstown Flood! There'll be five thousand people drowned downstream in a matter of hours! Tony, we've got to get you back here and out of that!"

5

WHEN THE Time Tunnel moved Tony Newman from Project Tic-Toc to Cambria County, Pennsylvania, the nearest city was Johnstown, Pennsylvania. It was served by the Pennsylvania Canal and by the Pennsylvania Railroad. It contained extensive iron foundries, among which the Cambria Iron Works was most notable. It had a national bank and a savings bank, two state banks, a daily newspaper and four weekly papers, and among the signs of its prosperity and progress was the fact that a monthly periodical issued from it. It lay in the beautiful Conemaugh Valley, along which the Pennsylvania Railroad ran for no less than twenty-five miles. It was a brisk, a progressive, and a thriving small city of twenty-eight thousand inhabitants and it boasted at least one biggest-in-America distinction in the freshwater fishing preserve and reservoir of the South Fork Hunting and Fishing Club of Pittsburg, only eighteen miles away. That was by far the largest artificial reservoir then existing in the United States. It was a full five miles in length, from a mile to a mile and a half in width, and with a depth varying between fifty and one hundred feet of water. The citizens were proud of it and of the thousand-foot-wide, hundred-foot-high earth dam which closed what once had been called Stony Creek, now known as the South Fork of the Conemaugh River. On May 31st, 1889, the people of the city rejoiced at the sight of blue sky above them, despite some clouds still deliberating whether or not to pour down more rain.

Except for the existence of clouds, of course, Tony Newman knew none of these things. He stood on soggy but solid leaf-strewn ground a quarter-mile or more from where workmen labored steadily but unexcitedly at heightening the crest of the dam. He found it impossible to believe what Doug had just told him.

He said, “But—but look, Doug! Everything’s all right here! There’s nothing wrong! There are workmen on the dam, raising its crest, but—that sort of thing’s done all the time on levees when the rivers rise! They know what they’re doing!”

Senator Clark’s voice, harsh and desperate.

“Newman, you will do nothing! You will stay where you are! You will do nothing! You must do nothing!”

“I’m not thinking of doing anything!” protested Tony. “I’m just waiting. But—what Doug said can’t be true! Everything’s perfectly normal!”

Doug's voice again, very grim.

"We've sent for everything that's known about the flood, Tony. It'll be coming in by facsimile in a hurry! Hold everything!"

Tony found himself at once shaken and confident and doubtful. All the world around him was totally as the world around one ought to be. Something stirred nearby, and he jerked his head to see, and a squirrel ran around the trunk of a tree and disappeared. Just overhead a song sparrow poured out liquid notes from its tiny throat. A little distance away something made a whirring noise. Here, at ground level, there was no breeze, but overhead a wind moved slender branches and a quail called somewhere and now—now!—Tony heard a trickle of water.

Without purpose, he moved toward the sound. He found a little runlet of a temporary brook, obviously the runoff of a hillside, which had gathered itself together. At one point fallen leaves were clumped together to make a barrier against which the water thrust. Eventually the leaf barrier must give way or else the water would find an outlet to one side or the other, and go down to the already over-filled lake.

He looked at it. This was a miniature and a forecast of what could happen on a larger scale a quarter-mile away. The dam of leaves did collapse. There was a rushing of the tiny flood. It swept away small twigs and even a fallen branch all of a yard in length. Tony knew that such trivial things were happening over the hillsides around him, if equally saturated by past rain. The lake would receive such contributions from hundreds of square miles. The fallen water would not have rushed down immediately. It would seep down and trickle down. It was still doing so. The dam had a spillway and a sluice which should let water waste itself once it rose to its most-desired height. But it was already too high. It wasn't wasting fast enough. Something should be done.

It occurred to Tony that he was in a kind of situation no other man in history had ever faced. He knew what was going to happen. It should be prevented. He ought to try to do something about it. But there was a possibility—Senator Clark had fiercely pointed it out—which conceivably might be true. If he changed what happened here and now, in 1889, the future he had come from would be changed. One ran into the baffling paradox that if one went back in time and changed the past, the future might be changed so one would not be born to go back and change the past and therefore the future. But this might be only sophistry. If he performed a significant action now, in time to come the ten minutes which had decided that the Axis would not win World War One might end differently. The ten minutes which determined the Battle of Midway might turn out otherwise than as

Tony knew it. A man named Fleming might not notice an oddity on a bacterial culture plate he was about to throw out and penicillin might not be discovered, or any of the other antibiotics which had changed the course of medical history. Any of these changes would cost many more lives than the five thousand Tony had mentioned. Five thousand lives. Nearly that many were snuffed out by automobiles every month, in the now in which Tony had grown up. He had no responsibility for those lives. But these were different! By action now he should be able to save lives of people living in a place called Johnstown, in an area called Pennsylvania, in a time called May 31st in the year 1889.

But he couldn't save their lives! The flood was over. Accounts of it were printed in books. It was history. The dead were dead. Only they weren't. He stared at the newspaper. It was fresh. It was new. He'd seen the dam whose failure drowned five thousand people. But it hadn't failed! Men were working on it! They couldn't be working on a washed-out dam, trying to hold back water that had already wrought destruction. But they were! It hadn't happened—yet it had …

Tony was dazed. He didn't know how long a time passed while he looked blindly at the newspaper page. But it must have been a considerable while before he realized that he knew about the decision of the city council to extend the paving of streets in such-and-such a direction. There'd been an alarm of fire, promptly responded to by the volunteer fire department. The blaze was extinguished with a loss of less than a thousand dollars. He was aware that the cake and rummage sale of the King's Daughters of the First Methodist Church had been highly successful. A runaway horse on Chalmers Street had broken a plateglass window in Curtiss' Dry Goods Store …

The paper shook in Tony's hands. He could not read it. He stuffed it away and started downhill toward the dam.

Doug's voice in his ears, *"Tony."* Tony didn't answer. *"Tony!"*

Tony said something. He didn't know what.

"We've got the facsimiles from the Congressional Library. Direct wire. We have the Johnstown Argus for May 30, 1889. The top left headline is about the city council paving some new streets. And there was a fire on Brooks Avenue, damage under a thousand dollars. Have you got that?"

Tony said in an abnormally steady voice, "Yes. And the King's Daughters had a successful cake and rummage sale, and the bottom right-hand news story is about a runaway horse."

Doug made a frustrated, embittered sound.

"What do I do?" asked Tony desperately. "I'm a quarter of a mile from where workmen are trying to build up the dam to hold the water back. If it starts to overflow the dam will go! It's dirt. It'll wash out! Instantly!"

Doug said nothing for seconds. Then he spoke doggedly of something else, *"We can't find anything wrong with the Tunnel. But you said it felt wrong when we tried to bring you back from where the rabbit had probably been. Ann's been tracking you. We want to try to bring you back from where you are."*

Tony said grimly, "I'm where it ought to be possible to do something about people who're going to be drowned. When will they die?"

Doug asked a question away from the microphone. His voice came back to Tony.

"The flood will hit at three this afternoon." Then he said urgently, *"Tony, if you come back you'll prove the Tunnel will do all we expect of it. That's your first obligation! It'll save more lives than anything you could do where you are!"*

A part of Tony's mind agreed. It was true. But another part insisted frantically that he was here, now, at probably half-past eleven in the morning of the day when a town would be wiped out by the now-tranquil, peaceful waters of the lake before him. And he should do something about it!

"Hold fast!" said Doug's voice abruptly.

An intolerable dizziness. A horrible sensation came over Tony, as if his arms and legs and all his body tried to move in all directions at once. His muscles tensed with the frenzied violence of muscle cramp and his skull experienced unbearable pressure …

He found himself crumpling as the total tetany of all muscles ended. He didn't manage to catch himself. He went down among the wetted leaves and humus in which he'd been standing. His surroundings were unchanged. All about him were familiar trees and underbrush. The temporary brook he'd seen was where he'd last seen it. His heart pounded horribly. He gasped. Doug's voice, *"Tony! Did you—no. The TV picture's the same. Blast! Getting you to a new place for a pull-back doesn't do the trick!"*

Tony said, still panting, "I couldn't breathe!"

"We'll figure it out," said Doug anxiously. *"But you'll have to stay where you are until we do. The rabbit could breathe while being moved."*

"I doubt," said Tony unsteadily, "that I can be moved just yet. The past has to be what it was. In the past from where you are, I did something. In the present, where I am, I haven't done it yet. Maybe I can't be moved from now, here, to now where you are, until I have."

"But that's—"

"It's a guess," said Tony. "But I suspect it's true."

Silence, save for the undisturbed natural sounds of half-past eleven

in the morning on a particular hillside in Cambria County, Pennsylvania.

"Tell me," said Tony," what you can tell me quickly about the flood. I want details. What made it happen?"

Doug sounded as if he were alarmed by some new conviction that had come into his mind.

"Wait a minute."

Tony sat still, getting back to normal. He happened to look at his clothing. He was coated with adhering wetted leaves and grayish mud and a very considerable smearing of reddish clay—all of them from his recent fall.

Surprisingly, it was Senator Clark's voice that came through the bone-conduction headphone next.

"Newman," he said harshly, *"we've later newspapers. You're near the dam. The data here says it was learned later that the discharge pipe at the foot of the dam was closed. If it had been opened a week earlier, there'd have been enough discharge to prevent the overburdening of the dam. The lake would still have risen, but not nearly so high."*

Tony nodded, and said, "I get that. Anything else?"

"The spillway—the sluice—was clogged with leaves and trash. The lake was the property of a fishing and hunting club. They didn't want their fish to go downstream. So the grating was close-meshed. It got clogged and water couldn't get to the spillway. It was practically stopped up."

"Anything else?"

"Nothing more." The Senator said sternly, *"You understand, Newman, that to change this would be monstrous! I do not believe you could. But you should—not—try! If you succeeded—"*

His voice seemed to stop with a click. It was no longer the impassioned and even fanatical Senator Clark who'd spoken. This voice was harsh. It was almost savage. But there was an overtone in it that Tony could catch but not interpret.

"I'm going to talk to the workmen," said Tony to the empty air about him. "I may not stop anything, but I may help a little. Damned little!" he added bitterly.

He stood up. He went down the hillside toward the dirt road from which he'd stolen and returned a workman's lunch, in one of the two wagons there.

He went out on the dam. Near him, a man took a sandbag filled with dirt and heaved it into place atop two other clay-filled bags. The work went slowly. There should have been planks on the ground to make the barrows ride easily. There weren't. Each barrow-wheel sank two inches or more into the dirt of the dam's top. The nearest next

workman looked at Tony. He was not interested. He dumped his burden and went back for more. The next man was many yards behind. He puffed on a clay pipe as he trundled his barrow along.

Tony made his way to the foreman. He wore a striped vest and a pink shirt and sleeve-garters. He wore a derby hat and smoked a black cigar. A palpably false jewel shone in his cravat.

"Look!" said Tony feverishly. "The dam's going to go in a few hours if you don't do something! Things have gotten out of hand!"

The foreman removed his cigar. He said without reproach, "Been drunk, eh?"

This was because of Tony's smudged and smeared appearance.

"The discharge pipe's turned off," said Tony urgently. "Turn it on and it'll do more good than a dozen layers of sandbags!"

"Yeh?" said the foreman. "Somebody sent you to tell me?"

"And the spillway—it's clogged! Next to no water's getting through! Take some men off this sandbag stuff and get the grating cleared! So the water can get through!"

"Yeh," said the foreman. "I noticed. You been drunk, ain't you?"

"I fell down," said Tony desperately. His feelings were those of someone in a nightmare. "Look! If the water gets over the dam top the dam will go! All the lake will go down the valley! It'll smash Johnstown! There'll be five thousand people dead!"

"You had the horrors?" asked the foreman. "Y' look it. Sound like it, too!"

"I know the dam's going to go!" cried Tony fiercely.

"Mr. Park's worried about it," conceded the foreman. "He's the engineer. People from Johnstown sent for him days ago. Some people always talk about this dam goin' every time it sprinkles rain. He set us to work here. He went off to get a crowbar."

A man pushing a wheelbarrow put it down, to listen. The foreman turned on him.

"You're gettin' a dollar a day," he said deliberately, "for workin'. You want the dollar, do the work!"

The laborer picked up the wheelbarrow handles and went on.

"Crowbar—"

"Mr. Park wants to turn on the discharge pipe," said the foreman comfortably. "It's rusted shut. Got to have a crowbar to do anything with it. He's gone for one."

Tony found his hands clenched. He knew futility. Everything that could be done was being done, after a fashion.

"Then the spillway—"

The foreman pointed. There was a place on the dam where its crest was bridged, so crossing from side to side was possible. The bridge crossed the spillway, made of heavy planks. Overflowing water should rush down a steep wooden incline and into a plank-lined ditch discharging it at the foot of the dam's slope. There was only a trickle of water going through. Not all the inequalities of the planks were covered. But all the planks were wet.

Tony heard his own voice making a sound but forming no words. He stared. Out in the lake, twenty feet from the dam, there was a massive iron grating. Beyond it was floating trash; branches awash; tree limbs; any quantity of floating, sodden leaves. They were concentrated into a semisolid mass. The lake's ripples came to that dense accumulation of debris and stopped at its edge. The stuff was not liquid. The grating had been made to keep fish from escaping the sportsman proprietors of the lake by going over the spillway. The grating had been installed as a strainer to keep the lake fully stocked with fish. But it operated as a strainer to accumulate trash and keep back the water with the fish. It was unthinkable that so much semiliquid stuff could be cleared away in time to do any good, without acetylene torches—which did not exist at the time period—or heavy machinery to smash the grating.

Doug's voice in Tony's skull, *"Tony! There's nothing to be done! It's in the past! You can't change it! You'd be a fool if you tried! And you can get killed!"*

"I'd rather take a chance on that than not," said Tony savagely. "I'd rather be a dead fool than alive and what I'd be if I—"

The foreman said, "Who the hell are you talkin' to? Are you still drunk?"

Tony realized he'd spoken for the microphone in his lapel, to Doug Phillips back—ahead—the opposite of Out Yonder, where Tony was. The foreman here hadn't heard Doug's voice. He'd have been bewildered or frightened if he had. There were not many telephones in the United States in 1889, and radio was unimagined. So the foreman thought Tony talked at random and to thin air. If he wasn't drunk, he would be insane.

"Clear out!" said the foreman curtly. "Talkin' to y'self! Get away from here!"

He advanced truculently. Tony found his fists clenching. But there could be no sense in fighting. What he must do was impossible, but to throw away a chance to do it would be disgraceful.

He turned and ran back to solid ground. He was panting when he reached the place where the solitary horse was tethered beside the two wagons. Its bridle had been removed. Tony was half-frantic with

the realized need for haste, but he fairly wrestled with the surprised animal to get the bit in its mouth.

He heard shouts behind him. He swung the horse about and hauled himself up to its back. As a boy he'd ridden bareback. Now he gathered up the wagon-length reins and slapped the horse's flank with them. The animal reared, and Tony flailed the reins again and the horse bolted down the wagon road away from the dam's crest.

More shoutings. Then an explosion. In 1889 it was not thought unreasonable for a reputable citizen to go armed. A foreman in charge of unskilled labor might even think a revolver a proper part of his costume. This one did. Tony was stealing a horse. Men had dropped their wheelbarrows. Some of them were running, quite uselessly. The foreman considered Tony either a lunatic or a drunk with the horrors. He levelled his revolver and fired. Perhaps he didn't intend to hit Tony. Perhaps he expected to frighten him into giving up horse theft.

But Tony slapped his mount yet again with the long reins. In them there was at least one solid, stinging buckle. The horse went plunging away. And the foreman emptied his revolver after him.

Doug's voice came, tormented and alarmed.

"Tony, you fool! What can you do?"

"Give warning!" snapped Tony. "There'll be people living between here and Johnstown! I'll warn them! Maybe one or two will be all I can warn. That'll be something! And it won't be enough to change history!"

Doug said bitterly, *"But you'll be riding where the flood's going to come! It'll overtake you! You'll be swept away—drowned! Get out of the valley!"*

Tony said coldly, "That's where the people who need warning are! I'm turning off the harness to save argument!"

He did turn off the harness, and in so doing he turned off those minor, lesser force fields which the greater force fields of the Tunnel alone could grip to for action upon the harness. In turning off the whole harness to shut off messages to him, Tony cut himself off from the Tunnel chamber until he should turn it on again. He didn't realize it. But it was realized by those who wanted to bring him back to his own time.

MacGregor made dismayed sounds. She'd kept track of him by the signal from the time harness he wore. It wasn't yet possible to know the meanings of those signals in terms of dial readings. But this group of them—whatever the separate ones might signify—meant the time and place where a rabbit had been, and been killed, and where Tony had been, and when. But now he'd severed all communication and the world and the people he knew were hopelessly far in the future and

his own parents were not yet born.

Truly marooned in time, then, he whipped his horse down the valley along which a hundred-foot wall of water would presently come surging.

6

A MILE along the muddy, leaf-strewn wagon road he met another man on horseback. This man wore a stiff collar, like the foreman, and he was well dressed by the standards of the time. He wore a derby hat. He wore a stickpin in his carefully tied cravat. He had an admirable moustache. But he was riding frantically, bareback, and his boots were clay stained and his trouser legs smeared with mud. He thrashed his horse unmercifully to force it to gallop up the steep dirt road. In this and in the fact of riding he was hampered by a six-foot iron crowbar, which he tried to carry in the hand that managed his over-long reins. This was, obviously, the engineer Park, riding the horse that belonged to the second wagon near the dam. He'd gone off after a crowbar with which to open the discharge pipe. He called urgently as Tony pounded past him.

"How's the dam? Is it holding?"

"It's going to go," Tony barked at him. He didn't slacken his horse's pace. "The spillway's choked. The discharge pipe's stuck shut! The water's still rising!"

He hadn't verified the last sentence, but he knew it to be true. With vast areas of hillside still trickling water into the lake, and none to speak of getting out, the water level had to be rising.

He was gone on down the wagon trail. Wet-burdened branches thrashed against his head and shoulders as he rode under overhanging trees. There were places where the ground underfoot was soggy. There were places where it was mud. Twice his horse stumbled and almost fell because of the headlong pace Tony forced upon it. He was not thinking clearly, now. He could make no plans. His thoughts were confused when he tried to organize them. There was monstrous disaster on the way. He had to do something about it. But it had already happened and he couldn't do anything about it. It was a catastrophe already described in the history books of tomorrow. He could have cursed the Time Tunnel for putting him in this predicament of knowing what was to happen with no power to alter it. Yet he couldn't stand aside and watch human beings die by thousands without at least trying to help, if only a few. But they were already dead,—but only in years to come, not now. As of now—the now he was in—they still lived and there should be hope.

More than a thousand miles and most of a century away, Doug Phillips said furiously, "He's turned off the transmitter, Ann! So you

can't even try to snatch him away! Dammit, I'm the one who should have gone Out Yonder!"

MacGregor's expression was very strange.

"I think you'd do the same thing," she said unsteadily.

"But I wouldn't have turned off the harness!" protested Doug. "Now we can never make contact with him again! He's gone!"

"No," said MacGregor. "I know—nearly the settings for where he'll be. If he turns on the harness again—"

She felt all the shock that sickened Doug, but foremost in her mind was the fact that if Tony hadn't gone into the past, Doug would have. And she was infinitely glad that he hadn't. He never thought of her except as a brilliant associate in Project Tic-Toc, but she was a woman. If he'd gone out into time and into Tony's situation, she felt that she'd collapse. She was sure of it. But she could be composed and competent in working for Tony's return.

Tony rode a saddleless horse down the Conemaugh Valley with a dam about to break behind him, and one of the major natural disasters of American history ahead. MacGregor labored with infinite care to set the dials and the knobs to pick up his signal if he should ever deign to communicate with the Project again.

Senator Clark, his hands shaking, fumbled with sheets of facsimile as they came out of the facsimile printer. His face was ashen-white. Kirk took papers from his unresisting fingers. He scanned them quickly.

"Here's something!" he said abruptly. "It says that an engineer named Park had been directing workmen in strengthening the dam. When he saw it was hopeless he jumped on a horse and raced down the valley warning people to make for high ground, that the flood was coming. Some people believed him. Others didn't. Those who believed him lived. The others died."

Doug ran his hand harassedly through his hair. Kirk said, "A man on the dam told Tony that Park had gone off after a crowbar to force open the discharge pipe. We heard that! So he must have gotten back and found it useless after Tony left. If he started out to give warning, he'd have left after Tony did. If he lived, Tony may, too."

"Does it say he lived?" demanded Doug.

"No. It doesn't say."

MacGregor moistened her lips.

"If he turns on the harness again, I can link to him once more."

"Which will help a lot," said Doug savagely, "seeing that we've tried twice to bring him back and each time nearly killed him!"

MacGregor said, "Dou—Doctor Phillips, here's a possibility.

Bringing him back may not have worked because—" She suddenly began to change the controls, swiftly and precisely. She set up a new pattern for the force fields of the Tunnel to form. "What we need could be—like this. And this."

Doug stared at the combination. It would have taken a long time to explain the pattern she proposed, but it was lucidness itself when formed on the control desk instruments. It was simply a new pattern, with a new assumption behind it, and allowing for the inevitably balanced field system that wouldn't promise everything, but could promise very much. Doug inspected it hungrily.

"It shouldn't pull him apart, anyhow. And it shouldn't do anything very drastic. But whether it would bring him back to now, I don't know." Then he said grimly, "We'll try it if he turns on his harness again."

MacGregor nodded. Being a woman, she noticed what a man would not. Doug had examined and approved her idea. But he'd said nothing in the nature of praise. And a man could be so absorbed in a problem that he wouldn't think of praise when a possible solution appeared. But MacGregor wanted Doug to think of her as a person. Praise would indicate that he did. Perhaps she was disappointed, but she gave no sign. She sat at the instrument board.

But nothing happened.

When Tony whipped a draught horse down the Conemaugh Valley, one Benjamin Harrison was President of the United States, and Levi P. Morton was Vice President. In foreign affairs the United States, in conjunction with England and Imperial Germany, was preparing solemnly to guarantee the neutrality and independence of Samoa. In other news, Police Chief Hennesy of New Orleans, Louisiana, had won great admiration by his activities against the Mafia, and had not yet been shot dead on his own doorstep by members of that organization. There was yet in the future, though not far ahead, that perilous imbroglio when it seemed that war between the United States and the Republic of Chile was inevitable. The cause was that two American bluejackets had been killed while on shoreleave from the battleship *Baltimore* in Santiago, Chile. At this time refined people used usually incorrect French phrases in social conversation whenever possible, though in business they talked intelligibly. And public opinion considered it outrageous that some union men were insisting that they should only work eight hours instead of the standard ten, for the standard dollar a day. There had been disorders over this, and the Haymarket Riots were fought over the difference of two and a half cents per hour wages. Those riots ended in a dynamite-bomb explosion killing seven policemen and injuring others, and this

anarchistic outrage immediately brought all right-thinking citizens to the side of the employers and the ten-hour dollar day.

But not one of those earth-shaking events was in Tony's mind, nor would any of them have been thought about if he'd known them. He came to a house, built in the valley and not two miles below the dam. He reined in his stolen horse and panted the news. The dam was going! Get to high ground immediately! As he shouted the warning, he found himself astonished that human beings in a civilized nation could live in such pure squalor. He saw that a whiskered, unwashed man heard him. At any rate, he stared. Tony wheeled his mount about and went plunging away. The man stared blankly after him and sat down to rest.

Tony rode on. Another house. Another. And another. The news of an impending collapse of the dam was taken calmly. It happened that precisely such warnings had been given before. There were timorous people in Johnstown, away down the valley, and over and over again protests had been made to the South Fork Hunting and Fishing Club, owners of the dam and the lake above it. On several occasions they had actually sent engineers to report on the dam, for the reassurance of the timid. Each time the engineers reported it safe. Privately, perhaps, the engineers deplored the lack of a heartwall in the dirt embankment to stop any trace of seepage, but an unfavorable report would be unwise. They could have reported that instead of crowning in the middle the center of the dam was actually two feet lower than any other part of it, but—it didn't seem necessary to mention it. The trouble of this particular time was that the dam was only earth, the discharge-pipe was closed, and the spillway was choked by floating trash.

Tony went on. He tried, again and again, to rouse the occupants of a cabin or a shanty to the danger he knew absolutely was upon them. Once, in desperation, he tried to insist that he knew the dam would break because he'd come back from the future with the news. But the man to whom he offered that argument went indoors and came out with a shotgun, with which to drive this lunatic away. Tony drove desperately onward.

His horse became exhausted. Tony pressed it mercilessly, flogging it to keep it going. He came to a village, well up the valley from Johnstown and assuredly in the path of the floodwaters that must come. When he got there, Tony was no longer a credible witness. There were perhaps twenty-five houses in the flat meadow-land where the village stood. There were people who lived here. He saw children.

He gave his warning with the desperate, hopeless sincerity of a lunatic. He knew, now, that he sounded insane. The existence of the

dam was familiar to these people. They knew it had been inspected and declared safe against just the disaster he tried to describe. Tony's face was white. His voice was harsh and terrible. He shouted at them hysterically, his horse whipped to a lather; treated as no sane man would treat a horse. The men of the village stood between him and their women and children.

He was convinced of the uselessness of his attempt to save lives now. Shouting crazy warnings, he flogged his horse on once more. It seemed to him that he had ridden forever, shouting warnings at people who looked at him stupidly, or affrightedly, but never as if they gave the least credence to what he told them. He was hoarse when the steeples of Johnstown showed very, very, very far away down the valley. Here was the hamlet of South Fork, with a viaduct carrying water for the Pennsylvania Canal. He tried to warn it. Later—much later—he tried to warn the people of the suburb of Woodvale. His garments were muddied and soaked. Sweat matted his hair. He was frantic with the frustration of knowing exactly what was going to occur, and the knowledge that every possible precaution had been taken against that exact catastrophe, and therefore nobody would believe it would come. There was every reason in common sense to think him at least a crackpot but more likely mad.

His clothes were not in the fashion or lack of fashion of the time. He was hatless, and people did not go hatless in 1889. He was muddy. He was weary and hoarse and frustrated. The borough of Franklin did not heed him. He rode at last into Johnstown itself, trying to shout his news. But his voice was gone. He rode a staggering, foam-flecked horse into the main street of Johnstown and knew absolute frustration.

Men gathered around him, because of his appearance. He told them in what was now the harshest and hoarsest of possible whispers, that the dam was about to break. That it could not be stopped. That a floodwall of water would presently be coming down the valley and that five thousand people would be drowned.

Absolutely everything operated to prevent belief. He was strangely dressed. In the year 1889 there was a costume the laboring man contented himself with, and there was a costume that stood for reasonable wealth and therefore authority. Tony was not wearing a standard frock coat, or a cravat of great thickness with a scarf-pin in it. He was not dressed in a manner to inspire confidence. His clothes were normal for almost a century in the future. He looked strange. Eccentric. His clothes looked like those a madman might wear to fit some strange role he'd assigned himself.

So the citizens of Johnstown stared at him. Some drew close to

listen. None believed. It seemed self-evident that he was mad. So a helmeted policeman said sympathetically, "I understand, sir! The dam's going to break so you want to tell somebody so something can be done. Yes, sir! You come along with me—"

The forelegs of the stolen, worn-out horse gave way. He went down in the main street of Johnstown. Some of the bystanders scattered. The policeman lifted Tony off the fallen horse.

"Yes, sir!" he said in tactful sympathy. "I'll take you to the Mayor. You tell him about it and he'll take charge!" He spoke crisply over his shoulder. "Joe, run get the doctor. Tell him to come running. Here's a poor fella's rode a horse to death to tell us about the flood that's coming. I'm takin' him to the Mayor so he can do what's necessary. You know where the Mayor's office is. A block up the street and right around the corner."

There was a significance in his tone that Tony was too exhausted and too despairing to note. The policeman held Tony erect and ushered him down the street. The man he'd spoken to departed at a run. Most of the tiny crowd that had gathered about Tony on horseback, stayed behind to regard the fallen horse and perhaps try to get it on its feet again.

Tony stumbled. He was numbed by pure despair. Around him the people of Johnstown went tranquilly about their business. Women wore bustles and skirts trailing the ground. There were horse-drawn vehicles in the streets. He could see the Pennsylvania Railroad bridge across the western part of the town. It was a monstrous mass of masonry, carried upon massive arches. It would later prove to be sound engineering and honest and competent construction. But Tony did not estimate it now. He staggered with such fatigue and such mental torment as no man could endure but so long. He knew that he was guided around a corner. He heard his voice whispering that he'd come back from the future, and that he knew the dam would break and wipe out the city, and that everybody should get to high ground as quickly as possible …

The policeman soothed him.

"Right you are, sir!" he said encouragingly. "You tell the Mayor about it an' he'll take charge an' get everybody out of town."

Tony stumbled up the steps. He went into a shadowy, stone-walled building with—he noticed this numbly—brass cuspidors by wooden benches, and a wood-panelled desk with a man in police uniform sitting behind it. The policeman said, "I'll get the Mayor." He went to the desk and murmured.

Tony drearily turned on the harness communicator. He didn't know whether he'd make contact with the Tunnel or not, but he whispered

hoarsely to the microphone under his lapel. He told of his absolute failure to accomplish anything.

Policemen came from an inner room. They wore helmets and carried billies. They moved upon Tony. He said hoarsely, “Now I’m arrested as a lunatic. I’ll be in the jail when the flood strikes. I’ll be dead!”

“Talkin’ to himself,” said one cop to another. “Cracked, all right!”

Tony stood up. He fought despairingly, without hope or anything to fight for.

The police were gentle enough. They were simply too many for a man already exhausted and with no spirit left. When they locked him in a cell, it was after searching him for possible instruments by which he could injure himself. They found nothing deadly. They did, though, take the time harness away from him. It had straps. He could have hanged himself with them.

He was, then, with no remaining connection of any sort between himself and the time and the world he knew. But he didn’t think it important. The dam would break at three o’clock. It was already after two.

7

THERE'D BEEN nearly five minutes between the time Tony turned the time harness back on again, in the police station, and the time the harness was taken away from him lest he hurt himself. In that five minutes he'd croaked for the Tunnel chamber to hear the absolute futility of everything he'd attempted. MacGregor had picked up his signal in its first thirty seconds, and she worked with a desperate deftness to link the harness and therefore Tony to the complex force-fields the Tunnel created. But before she was satisfied, her whole effort had been made useless.

In the Tunnel chamber, Doug listened, leaning forward in his chair with his head in his hands. Those in the Tunnel chamber had been waiting for Tony to turn on the harness again. He'd done so. Now Doug had heard his hopeless report, and he hated himself for having thought that besides saving Tony from becoming a castaway in time, his return would mean a possible change in Clark's attitude toward the Tunnel and all it could mean.

But Clark visibly jumped when Tony's first words came out of the battery of loudspeakers. He'd been pale before. He went ashen, then. He paced the floor agitatedly while Tony's voice drearily gave its narrative of futility. The television screen showed no really clear picture inside the police station. The picture tube was not adjusted for the semidusk inside a public building of 1889. Only vague shapes showed across a dimly glowing image space.

Kirk, too, went tense when Tony said hoarsely that he was arrested as a lunatic and would be in the jail when the flood struck. Then the sounds of his struggle came out of the loudspeakers in the Tunnel chamber. And then noises as the possessions in Tony's pockets were taken away—if there were coins, nobody noticed that they were remarkable—and then the thumpings of things carried somewhere and dumped. Then voices—not Tony's—discussed the necessity of keeping Tony in a cell until doctors could examine him and make sure that he was insane. But of that there could be no doubt.

It was this conversation in strange voices, plus the vague, unchanging image on the television screen, that made Doug and Kirk and Clark and MacGregor really realize that the harness had been taken away from Tony and put away somewhere else. MacGregor finished the adjustment of the Tunnel's controls. She said uncertainly, "I'm linked on to the harness, but—"

"Wonderful!" said Doug, savagely. "They took it off him. He's locked in a cell. Maybe you can bring the harness back, but he won't be in it. You can't bring him back unless he has it on!"

He stood up. He said coldly, "Kirk, hunt up a map of the town of Johnstown in that facsimile stuff. I have to find the police station. And if you can find a map that shows what part of the town was smashed and what part if any escaped, it may be useful, too. But hurry!"

He went to the cupboard from which Tony had taken one of the two harnesses Doug had put together. He took the remaining one. Senator Clark said in a peculiarly thin voice, "What are you going to do?"

"Get Tony," said Doug as coldly as before. "Your intention to see to the scrapping of the whole project takes away all my reasons for caution. Anyhow I'm anxious to know what time travelling feels like!"

MacGregor gasped. Then she said shakily, "I—I won't do it! I won't work the controls! Your life would be in my hands, and if anything happened—"

"Take over, Kirk," said Doug. He began to strap the time harness on himself. He checked the picture tube and the microphone and the small signal-generating unit which made the Tunnel's force fields have their effect upon the harness and its contents. He straightened up.

"Send me out," said Doug grimly, "on the linkage settings. Then switch to the new pattern Ann worked out—but don't try that one until I say so from where Tony is."

He walked briskly to the Tunnel, stuffing facsimile sheets in his pockets as Kirk silently handed them to him. He said, "Power off now. Remember about the controls!"

Kirk reached past the shaking MacGregor. He threw off the power. The wavering bluish glow of the Tunnel's metal ribs and girders ceased. Other lights glowed more brightly for an instant. There was the ending of the power hum they had ceased consciously to hear—and the silence was notable. Doug climbed up on the curved metal forms that made up the Tunnel. He picked his way into its length. He glanced at a facsimile sheet and pushed it back into his pocket. He said, "Power on, Kirk!"

White-faced, Kirk threw the main switch. There was a violent crashing sound. The droning hum of unleashed power returned. The heavy steel and copper tracery of the Tunnel glowed with a lambent light.

Then Doug suddenly wasn't there any more. The Tunnel was empty.

That was in the underground complex of machines and corridors and recreation areas and mess halls and more machinery which was Project Tic-Toc. Tony was in a cell in the police station in Johnstown,

waiting numbly for destruction. A certain number of miles from where he waited, there was a sudden boiling-up of water at the downwater edge of the dam embankment. This was the dam which made the lake which held the water that was to be disaster for Johnstown. And Tony. And undoubtedly, it seemed, Doug himself.

Nobody noticed the appearance of a growing, rippling pond at the foot of the dam. On its crest, men rolling bags filled with earth trundled back and forth, raising the top of the dam. They continued stolidly at their work.

Some miles nearer to Johnstown, though, there was another sweating horse on its way down the valley. It came to a house and its rider shouted loudly. He shouted again as he passed it, and yet again when beyond. His message was the same that Tony had cried a half-hour earlier, but this man was clothed in a way to cause belief. His garments were those of an educated man in 1889. He had a derby hat on his head. His trousers were muddied past the ankles, but that was because he'd tried desperately to add his strength to that of the workmen for the opening of the lake's discharge pipe. He'd failed. It was rusted shut past even the power of a crowbar to open it. He'd ordered the workmen to carry on. By raising the dam's height they could not prevent but they might delay disaster. Now he, so far as he could know, was throwing away his life to try to save other lives. But he was more successful than Tony had been. He was believable because he was dressed like a man with authority. Even a spreading moustache added to his credibility.

His name was Park. He was an engineer sent to examine the dam. He'd arrived too late and faced a situation it was impossible to correct. He'd done his best to correct it, but now there remained only the throwing away of his life to give warning along the prospective path of destruction. He deserves to be remembered.

He rode frantically down the valley, crying out wherever there were ears to hear him. He saved some lives. A few—nobody knows how many—of the cabin-dwellers in the Conemaugh Valley did accept this second warning and climbed not too hurriedly to where they believed no flood could reach.

In Johnstown itself, in the dismal dim interior of the police station —suddenly, in a fortunately empty corridor, there was Doug Phillips. He was clothed eccentrically in the judgment of the time, and he was very grim and very, very much in haste. He was bound to be seen shortly. He didn't know where Tony was, save that he was nearby. He didn't know where the harness taken from Tony could be, except that it wasn't far. If Tony was locked in a cell, Doug had nothing with which to break it open and it would be necessary to have Tony and

the harness together if MacGregor was to use the Tunnel force fields. Now that he himself shared Tony's special predicament, Doug was confident that MacGregor would use her skill. But he was much inclined to be pessimistic about the whole situation.

Outside the police station, the sun shone brightly. Scattered clouds did not happen to shade any part of the town. All was brightness. Women in long, trailing dresses lifted their skirts delicately when they stepped down from curbstones. At such times dust ruffles were likely to come into view. A dust ruffle was an unornamented strip of cloth inside the hem of a lady's street costume. Its purpose was to drag on the sidewalk and to absorb the dirt, dust, and gobs of tobacco juice which marked all public walkways. It was one of the less pleasing necessities of a well-dressed woman to have to rip off such dust ruffles and replace them with clean strips after each stroll outside her home.

There were children, too, upon the streets of downtown Johnstown. They walked sedately, holding their mothers' hands. The little girls wore hair ribbons and sashes and shoes that buttoned halfway to the knee. Little boys wore large straw hats, tethered by cords against loss when a wind blew them off.

There were horse-drawn vehicles everywhere. Along Main Street there were drays pulled by two and four heavily built draught horses. There were a few carriages, with ladies using parasols to protect their complexions. There were rather more buggies and there were some bicycles, though bicycling was still more a refined form of exercise than a way to get from one place to another. There was business as usual, shopping as usual, and all the normal activities of a bustling small town. Nobody was afraid.

But eighteen miles away, where lay the privately owned lake and fishing preserve of the South Fork Hunting and Fishing Club of Pittsburg, there was another boiling-up of water. There was suddenly a second, lengthening streak of agitated liquid at the base of the dam. It reflected the sky only erratically because there was disturbance under it. But now, a hundred feet higher, a workman glanced down and saw it. He pointed. Other workmen saw. The foreman in the striped vest and pink shirt saw them staring. Suddenly there was a crack in the embankment and there was a welling-out of water halfway down the dam's downstream surface. It was yellow water, thick with clay.

The workmen fled.

Not far from Johnstown the suburb of Woodvale nestled comfortably among its trees. Children played. Women kept house with the fine complacency of housewives contented with their lot. Nearer still to Johnstown, the borough of Franklin went about its affairs. In

the newer parts of the town below Johnstown proper, in Kernville and Glendale, housewives planned their evening meals and debated their contributions to a prospective church supper to be given the Wednesday following.

In the Johnstown police station, Doug found the desk sergeant. Doug's costume was strange and even absurd, to that officer. So Doug explained crisply that he was Doctor Douglas Phillips, and that he believed his patient—his special patient—had been brought to the police station. As a doctor, he assured the desk sergeant that the young man was quite harmless. His patient's extremely wealthy family had secured his—Doug's—exclusive services to attempt a new treatment for his mental disorder. He was winning the poor young man's confidence by even dressing in the peculiar fashion his patient's delusions demanded. His patient, said Doug, believed that he had lived in the future and had come back nearly a hundred years in the time-travelling costume he—Doug—wore to seem sympathetic and convinced. His patient would have been giving warnings of disaster approaching which he had come to know about in the future. But he was quite harmless. If he could be released—

His explanation seemed to be proved when Tony, waiting in a cell to die, cried out, "Doug! Why'd you come here! Don't you know the dam's going to break?"

Doug nodded significantly to the desk sergeant. It was perfectly obvious that Tony was the afflicted son of a wealthy family. He could be released. He should be. Even the queer set of straps and objects like a harness—yes. They would calm him. Yes …

But eighteen miles away, up the South Fork of the Conemaugh River, a section of earthen dam, a hundred feet high and ninety feet thick at the bottom—three hundred feet of the dam slid deliberately forward. It moved like a single mass, as if it were on wheels. Seepage at the very bottom had produced a layer of saturated mud through which water began to flow. It was a perfect lubricant. The lateral pressure of the water varied from half a pound to the square inch at the top, to fifty pounds to the square inch at the bottom. The last figure amounted to seven thousand pounds of hydrostatic thrust to the square foot, trying to push the dam down the valley. And there were tens of thousands of square feet.

So a three-hundred-foot wide, one-hundred-foot-high mass of packed clay suddenly moved out exactly as if it rolled on innumerable rollers. The rest of the dam did not yield. It dissolved as the water poured out past the breaks. The original yielded dam section cracked and crumpled like powder, and a hundred-foot-high wave plunged out. The water of five miles of lake-length surged to freedom. A little

below where the dam had been, the valley bottom curved upward at its sides. Trees, brushwood, boulders—everything went, but the sloping valley sides deflected the rushing waters into a peak actually higher than their source.

A booming, howling noise rose up to the skies. A horrible rolling wall of destruction roared down the valley. Trees, even the largest, whirled away like twigs in its racing mass. Nothing could withstand it. Nothing! It did not seem to spread, at first. It was like some impossible serpent whose substance was disaster, winding and coiling its way with lightning speed down the valley.

From the site of the dam to the South Fork junction with the Conemaugh, the distance was six miles. The flood-front took three minutes and a few seconds to get there and tear out the Pennsylvania Canal viaduct as if it were cobweb, and then to surge against the opposite mountainside. It swerved and flung down the valley toward Johnstown. It was not a wave, which might be expected to work havoc and then pass on. It was the contents of a lake covering hundreds of acres, flooded nowhere less than fifty and mostly a hundred feet deep. It was fifty million cubic feet of water. It would cover an acre to the height of a respectable mountain. It was so vast a quantity that even with the dam completely gone, the lake bed did not show for nearly an hour. And this was still twelve miles from where Tony Newman was released in the custody of that self-styled physician, Doug Phillips.

"Put on your harness, Tony," ordered Doug as they went out of the police station. He heard nothing but the clip-clopping of horses' hoofs, and voices, and once the tinkle of a shopdoor bell. "Being a lunatic, it's all right now. But look docile!"

He brought out the facsimile sheets Kirk had given him. He consulted them one after another. He looked up sharply.

"Here's a picture taken after the flood," he said grimly. "There's the Bon Ton store, A. Cohen and Company. Here it is, next to the saddlery shop building. There's a corner torn out of the saddler's, but the Bon Ton building stands firm and tall. If we could persuade a few people to get upstairs there … But both of us would be arrested as lunatics! There've been warnings before. Too many! Like the boy crying wolf they've heard the cry of Flood. They can't believe it any longer. How about your harness?"

Tony buckled the last fastening.

"Now," said Doug, "we want to find a place where we won't be observed to vanish. There'll be survivors. Some. We don't want any of them to remark the two of us vanishing into thin air immediately before the flood comes. The whole point of Project Tic-Toc is that in

order to influence history it must never be mentioned in history."

Tony took a deep breath. One or two people looked at him and at Doug with some curiosity. But the town, at that moment, was utterly complacent and self-absorbed and oblivious. Now, standing on the main street, Tony realized how completely impossible his attempt to warn had been. Human beings don't scare easily. It is probably necessary if life is to go on.

Still, twelve miles from Johnstown, a monstrous wall of water swept down the Conemaugh Valley. It had torn down the viaduct at the South Fork junction as if it were straw. It struck East Conemaugh, which had been hidden from Tony by trees, when he rode down the wagonroad. It was a railroad complex, where locomotives and railroad cars were held in reserve on side tracks until they should be needed.

The flood hit them. It tore up the very ties and rails and switching equipment. It lifted locomotives and boxcars like so many feathers. The locomotives were huge, for the period. They averaged twenty-five tons apiece. But the water-wave acted as a piston with inconceivable force behind it. It carried the pieces of railroad equipment before it, turning them, twisting them, rolling them over and over with trees and houses and a very few wagons and horses. It somehow swung them to the center of its forward mass, as if to use them as weapons upon anything that tried to stop its rush. And instead of slackening its pace, now it flowed on more swiftly than before.

It was not a wave but a wall of water, merged with giant trees and railroad locomotives and horses and wagons and planking which had been houses in which humans dwelt. Perhaps there were already the corpses of men and women in it, but perhaps they were not yet drowned. The flood ran the six miles from its outbreak to the South Fork in a few seconds over three minutes. The last twelve miles to Johnstown it made in seven minutes more.

In the course of those seven minutes, Tony and Doug moved almost numbly in the unsuspecting town. It was unspeakably horrible to see people going about their affairs when towering walls of water would presently be crashing over these buildings, sweeping away the pedestrians and the buggies and the horses; to know that that huge dray, for example, would presently be swallowed up in the monstrous gullet of a wave-front higher than the buildings of the town. But there was absolutely nothing they could do.

Doug was talking in a low tone to the Tunnel chamber. He said, "Tony, Kirk says your harness isn't turned on. Switch it on and pray it wasn't smashed when they took it away from you."

Tony said, dry-throated, "Right now I don't really care."

But he thrust over the switch, which had undoubtedly been turned

off when the harness was handled by the officer who returned it. He put the bone-conduction headphone where it would function and still go unseen. Kirk's voice came harshly, *"Tony! Say something!"*

"What?" asked Tony wearily. "I'm looking at dead people walking around. They don't know yet that they're dead. What should I say?"

"We can see that too on the television screen," said Kirk grimly. *"Ann's back on the job, adjusting the controls to handle the both of you at the same time. Doug didn't think of that. She's not sure you'll get back here at the first transfer, and you should be together no matter what happens."*

Tony did not answer. Doug, beside him, said suddenly, "Listen!"

There was a sound in the air. It was a deep, booming, roaring sound, but it was very faint. As they listened, though, it grew louder. It was coming nearer at the rate of very nearly two miles a minute.

The policeman who'd taken Tony to the station-house saw him walking, free, with Doug. He hadn't noticed the roaring noise. He approached Doug.

"Your friend here—"

"He's my patient," said Doug curtly. "I dress like this to humor him. I've got him soothed now. Please!"

Tony said, "Listen!"

The booming sound was louder. It became louder still. People walking on the street stopped to listen. There was a shout, and a buggy came racing up the street, its occupant wielding a buggy whip frantically It was headed for the higher part of Johnstown. The rumbling drew nearer. A woman screamed somewhere. The meaning of the implacable, increasing roaring sound had made its way into her mind. She stood paralyzed, and screamed again. A man began to run. Other men ran. The policeman pounded away. Some folk fled crazily for anywhere or nowhere, only conscious that death bellowed down the valley and would overwhelm the town. They became incapable of anything but panic and flight. Some made for high ground. Some made it.

"Kirk," said Doug's voice beside Tony, "it's high time to shift us if it's to be done!"

Kirk's voice came to Tony as well as to Doug.

"The Tunnel has to be set for both of you. Moving you separately, with different weights and masses, you wouldn't land in the same place. If we're to get you to the Tunnel—"

There was a strange, varicolored tide seeming to come along Main Street. It was men and women and children. The dark-colored garments of the men did not blot out the lighter clothing of the children and the women, but on the whole the men ran faster. A child

fell, and a woman stopped and dragged it to its feet and ran on with it. A man fell, and other men ran past and over him. A great dray turned in midstreet and its four huge horses burst into a gallop. Its whip cracked and cracked. It went on past. The street was a horde of running human beings. Some women screamed as they ran. Some men babbled.

But there was nothing to be seen anywhere to justify this panic. The sun still shone brightly. The sky was still blue, with fluffy clouds. There was only a roaring and a bellowing and a gigantic rumbling sound which drew nearer and continuously became louder. Under it there could be heard screamings. But they were overwhelmed.

The sound became a numbing, deafening thunder which filled all the world. Then Tony saw sunlight glitter on water rushing toward the town. It was a wave crest higher than houses, with a solid glistening mass of water behind it. Its leading surface was hardly liquid. It was tree limbs and locomotives and planking and debris, all churning and hurtling mercilessly onward. Strangely and even insanely, somewhere it had picked up hundreds of rolls of barbed wire and they'd become unwound, and the forefront of the flood was debris and yellow water and foliage tangled in that wire, together with every movable or removable object that a flood at two miles a minute could pick up and carry away. When it reached Johnstown, the fluid battering ram was fifty feet high and half a mile wide, and it rushed upon the town almost exactly as fast as a falling object falls during the first second of its drop.

8

IT WAS one gigantic mass of water, but it hit the town in two sections. One swept over the flat ground at the base of the mountain on the valley's farther side. Here it destroyed the community of Stony Creek, where the unprecedented rains of the past few weeks had already put some of the streets under water. The other portion struck through the very center of the city of Johnstown, and steeples toppled and buildings collapsed while the bellowing of the water was louder than the screams of its victims or the crashings of the structures it demolished.

It seemed to be possessed by a demonic fury. Splintered beams, carried by the incredible water mass, stuck out from its glistening sides. They wrought havoc. The debris it carried—there were still twenty-five-ton locomotives in its forefront, brought twelve miles from where they had been swept up—crushed everything it struck, and then the flood took the fragments to itself.

In all the town there was but one man-made thing that met the flood's full force and did not instantly disintegrate. That object was the railroad bridge of the Pennsylvania Railroad, so soundly and so strongly built that the impact of thousands of tons of wreckage and hundreds of thousands of tons of water could not destroy it.

The flood seized upon this defiance with satanic glee. The bridge was a series of massive arches, well fitted to catch and stop the larger masses of wreckage. When the flood-front hit it, instantly its arches were choked by the carried stuff. Tree trunks, sections of railroad track with ties and rails still adhering to each other, boilers, boulders, bricks, wagon wheels and horses, planking and the bodies of human beings—all piled up in a chaotic mass. There were some small houses, newly snatched up and not yet torn to shreds. They were hurled against this barrier, very possibly with people yet alive inside them. And this self-created obstacle swerved the floodwater which nothing else could oppose. The flood-rush changed direction, still four stories high, and struck the other portion of itself, which had just completed the annihilation of Kernville and Glendale.

And the two, reunited volumes of destruction went through the center of Johnstown. What had been left standing was torn apart. What had been ignored was now toyed with by the liquid monster. By some freak of terrain and the barrier built up by the railroad bridge, the towering stream began to spin in a vast whirlpool, round and

round and round.

Tony and Doug had not joined the flight of those who tried to flee before the flood arrived. They were almost at the same spot where they'd first heard its faraway growling.

"Kirk!" said Doug. He was numbed past normal reaction. He seemed irritable rather than appropriately awed or frightened. "Kirk! We can't stay here! We'll be dead in minutes!"

"You moved!" said Kirk's voice, tensely. *"Stay still! Ann's trying to link you up again, but you moved!"*

Tony did not speak. He watched the unbelievable. But the more than unbelievable came to be. The piled-up debris on the railroad bridge, brought there by water, crashed there by water, wetted by water—it caught fire. Flames and smoke rose from the shattered mass. If anybody lived in the disintegrating houses snatched up by the flood from nearby, there could be no hope for them.*

*(Improbable as this may seem, it is historically true. It is not known if anyone was alive in the debris piled on the railroad bridge. —M.L.)

There seemed no hope for Tony and Doug. They stood alone on ground that so far was not even wetted by the flood. But all around them a gigantic whirlpool raced in a monstrous glistening circle. It had smashed everything in its path but the railroad bridge, whose over-burden of now burning debris laid a pall of smoke over the entire disaster.

The flood had scoured a clear path for itself. It went round and round, the centrifugal force of its curving flow not yet allowing its central hollow to be filled. But there was now the beginning of a loss of speed. Water began to flow into what had been a hollowed-out space. Buildings still standing began to lean and crack and subside into pure wreckage. There were some people still in some of those buildings. They were doomed.

A man crawled out of a window and let himself drop into water swirling about a brick structure. The water was breast-high. It swept him to oblivion as the building he'd just left made a curtseying motion and fell in upon itself. There was a frame building, nearer. It lurched and leaned against its nearest neighbor while waves tore at it. The flood seemed to snarl, now, as if it raged because its strength was dwindling.

Somebody crawled from the leaning frame building. He made it to the building against which it rested. Another man followed. The first reached back and helped him. They helped a child across and then a woman. She was horribly hindered by the voluminous skirts of the period. The last man in the leaning structure followed the first ones to safety—or so it seemed.

"If they make it to here," said Doug in a detached voice, "the picture says the Bon Ton store won't be smashed."

Water began abruptly to flow about their feet. Wavelets appeared. Doug said as detachedly as before, "Kirk, we haven't much time!"

Kirk's voice said in Tony's skull, *"We've almost got it. Ann's almost got it!"*

One of the men appeared at the street door of the building into which he and the others had clambered. The water here was only three feet deep, but rose rapidly. He called to someone behind him.

Tony abruptly ran to help. Doug compressed his lips. Back at the Time Tunnel, Kirk would be waiting in terrible impatience for MacGregor to say that she had both Doug and Tony linked in with the force fields that had brought them here and should be able to take them back. Senator Clark would be pacing up and down the Tunnel chamber. He'd be frantic. He couldn't demand that the rescue attempt be abandoned and Tony and Doug left to the fate imminently upon them. MacGregor would be working with trembling hands and desperate precision. But Tony had now moved from the spot on which the force fields were being centered. Neither of them could be snatched away, with the controls almost set for both. But Doug stayed where he was because if Tony came back the adjustment and the rescue could be completed.

The water was still rising. Currents became almost irresistible.

The man came cautiously out of the building to which the five had made their way. He tested the strength of the currents. Tony seized a metal awning rod before the Bon Ton store. He held out a hand. The two other men and the woman and child appeared.

"Come on!" called Tony. "The flood won't hit here!"

The first man ventured farther. It was well above his knees. He floundered desperately to where he could seize Tony's hand. Then he did not try to pull himself to safety. Instead, he reached back. A second man fought his way through now thigh-deep water to where he could catch the first man's backward-reaching hand. He reached back. He brought the child forward. Her head had to be held above water. Doug swore savagely and he came to help, too. He stood in deep water and took the child as she was passed from hand to hand. She was terrified but very brave. The water was still deeper, now. Swirling, violent currents showed on the water surface. Doug fought his way to the Bon Ton shop.

Then he shouted. The three men were trying to get the woman past the mercilessly rising water. Her skirts would have made it nearly impossible in any case. But Doug cried out. A four-story building across the street collapsed. A savage wave from its fall struck across

the narrow space.

The man whose hand Tony gripped was wrenched away. Tony himself was completely submerged. He held fast, and held fast. He saw the woman for an instant as the wave subsided. She went toward deep water and disappeared. He saw neither of the men. Undersurface currents had dragged them away.

In the backwash of the wave he made it to the door of the One Price Clothiers store. Doug was inside. He was bleeding from a cut on his cheek. Broken window-glass from the store window had cut him. But he held the little girl fast. In the store, now filled with water, swell-like surgings of water moved back and forth.

"Upstairs," panted Tony. "I don't believe the building will stand, but —you say the picture said so!"

They found the stairway. It was carpeted. There would be no elevators in a store in Johnstown in 1889. They wouldn't be running now, in any case.

They climbed the stairs. Strangely, the air was filled with the peculiar smell of fabrics. The second floor was fitting rooms and display racks. The third floor was a loft, with bales of cloth and boxes of merchandise. There was nobody else here. The flood still roared and bellowed and growled, but it was not quite as loud as it had been. There were snarlings in the sounds it made, as if even the massacre it had achieved was incomplete without an eight-year-old little girl as a victim.

Tony said comfortingly to the child, "We're safe now. There's nothing to worry about."

She swallowed. She said, "Auntie Grace—"

"I think she's all right, too," said Tony. "But anyhow you're all right! We'll find out about Auntie Grace later."

He heard Doug's voice. He was using his microphone, talking to the Time Tunnel. He was estimating the distance and the height from where MacGregor had been trying to link them in, and this present position. It might help find the proper linkage-spot and perhaps—maybe—there'd be a swift return to a normal time and place, deep underground beneath a lifeless desert.

It occurred to Tony that now he and Doug, in the past, had done something that would affect the future. They'd saved the life of an eight-year-old child, three-quarters of a century before the Time Tunnel was made. If Senator Clark's apprehensions had any basis, there would already be differences in what they'd known as the present. Anything might have happened. Anything! But—

"What's your name," he asked the child.

"Julie," said the girl, "Julie Bowen." She asked anxiously, "Do you think Auntie Grace is all right?"

"I hope so," said Tony honestly. "But I can't be sure."

Doug muttered busily into the microphone which was a part of the harness the Time Tunnel was made to make use of. He looked up suddenly.

"Tony! We're hooked in! Ann's got us both linked up! Ready?"

"Just a moment," said Tony. He spoke very carefully to the little girl. "We have to go away," he said matter of factly, "but you're all right. You mustn't be frightened. The water will be all gone presently. You just stay right here until you can look out the front windows and see people walking around in the street outside. Then you can go down the stairs. And then you tell them your name, and they'll take you to your Auntie Grace or someone you know, anyhow. Do you understand?"

She looked at him solemnly and nodded.

"Can you count?" asked Tony.

She nodded again.

"Then when I say, 'Go ahead!' you close your eyes and count up to ten. Then you can open them again. We'll be gone. And then you wait here until you see people walking around in the street, and then you go down and tell them your name. Understand?"

The child nodded yet again. She was still a little uncertain whether to be frightened or to take this as a sort of game on incomprehensible terms. But she waited solemnly.

"All ready, Kirk?" asked Tony.

Kirk's voice said, *"All set."*

"Then—go ahead!"

He saw the child's eyes close obediently. She began to count.

Giddiness seized him. He had an instant's anguish as if he were being pulled a thousand ways at once. Then—

He was somewhere else in pitch-darkness. Stars shone down. There was air to breathe. There was grass underfoot. Doug did not seem to be anywhere nearby.

Tony knew certainly that he wasn't in Johnstown, any more. It was very doubtful if he was in the year 1889.

But he wasn't back in the Time Tunnel either.

9

THERE WERE uncountable stars overhead, though where Tony had been only seconds before, as he experienced time, there'd been bright sunshine on the wreckage and debris of a formerly thriving town. There was no city here, however. There was no disaster. Nor any light except the stars. All about him was blackness. Tony stood still. He felt grass stalks against his legs. He heard only such minute noises as he would ordinarily call silence. But silence as one notices it is not the absence of sound, but of sound with meaning. He was practically unaware of many tiny noises because he could interpret none of them.

A whispering, for example. It seemed to come from all directions. It was not the sound of wind in trees. It was something else. Tony didn't recognize it, but it had never happened before that he was in darkness on a prairie or an extensive grassy plain over which a night wind blew softly.

Some small noises were insects, no doubt. He heard presently a high-pitched wailing sound which was not a dog. He didn't know what it was because he'd never heard a coyote before.

He spoke to his coat lapel. There was a microphone under it.

"I'm somewhere," said Tony, "and somewhen. But I can't guess when or where. It's dark and Doug's missing. Do you know anything about him?"

Kirk's voice came in the bone-conduction receiver. He seemed vastly relieved.

"You're all right, Tony? Things didn't go as we hoped. We've lined up Doug. I don't think he's far from you. The dials read practically the same for both of you." Then he said, *"Wait a minute! Senator Clark wants to ask you something."*

It wasn't a time or situation for trivia. So Tony said, "Put him on. What's the question?"

Senator Clark seemed to be panting.

"That little girl! You saved her life! She told you her name!"

"Yes," said Tony. "What of it?"

"What was her name?" demanded the Senator. There was something close to desperation in his tone. *"What was it?"*

Tony considered.

"It was Julie. Julie Bowen. Why?"

Senator Clark's voice broke. Then it was strident.

"M-my grandmother," he said brittily, *"was a survivor of the Johnstown Flood. Her name was Julie Bowen. She was eight years old at the time. Her Aunt Grace was drowned. When I—was a child and she was in her fifties I myself heard her tell what she remembered of the flood. Two men, she said, saved her from drowning and put her in safety in the Bon Ton Clothiers' building—one of not more than a half-dozen buildings that stood in the center of the town."* The Senator's voice became indescribable. *"They wore strange clothes. They told her to shut her eyes and count to ten and—then they were gone. But she stayed where they left her until people appeared in the street outside. For years she believed the two men were angels sent to save her life."*

Tony did not speak, standing in the deepest darkness of the night. Senator Clark said helplessly, "You saved my grandmother's life when she was a child! If you hadn't, I'd be—I'd be—"

"You wouldn't be," said Tony drily.

"But how—how—"

"We weren't angels," said Tony. "It was just Doug and me. We were in that time from the time you're speaking from, shifted back by the Time Tunnel. What we did was done in 1889, and its consequences, including you, were the perfectly normal consequences of things happening in 1889. The effects of what we did were perfectly normal. The only oddity was that we'd travelled back in time to do it. If we'd been in Johnstown from another city, the results would have been the same." Then he asked, "Have you any idea where Doug and I may be? Or when?"

"The coordinate readings on you and Doug are almost identical," said Kirk, worriedly. *"One is identical. We hope we can identify that as the coordinate for time. Another is very nearly so. We hope that's distance east-west or north-south."*

"But," said Tony, "it might be east-northeast by east or west-southwest by west. What about Doug?"

"I'm listening in," said Doug's voice in the receiver. *"I'm going to try a shout. Listen for it."*

Tony did listen. He heard Doug's shout. It was faint, very far away. He shouted back. They were men of the late twentieth century and unconsciously assumed that earlier times were different only in technical respects from the time they knew. It hadn't occurred to Tony to be frightened in a cut-over patch of woodland, though he had no idea where or when it might be. It didn't occur to either of them, finding themselves knee-deep in grass under a star-filled sky—it simply did not occur to them to question the safety of calling attention to themselves by shouting.

They made their way toward each other, calling out now and again. Reflection on this later would be enough to make their scalps crawl, but at the time it seemed reasonable enough. When Tony had moved perhaps two hundred yards from the spot to which he had been transferred, the gentle night breeze around him brought an evil smell to his nostrils. It was the smell of carrion and burned hair and scorched wood and hides, a most improbable combination. It was not, however, a blend to suggest that it be investigated in pitch darkness.

Tony and Doug saw each other when they were only yards apart. They gripped hands, rather absurdly. But before they could speak MacGregor's shaking voice came to each of them simultaneously.

"Doctor Phillips," she said pathetically, *"I had you both in the force fields. Truly I did! I—was sure you'd both come to the Tunnel! I—thought you might pass through it like the rabbit did, and have to be brought back from the future, but it didn't even work out that way! I—only moved you in space. Just a little in time, the coordinates say. You know how I set the controls! But instead of bringing you back here I—only moved you to—where you are!"*

Doug said sourly, "I know! I know! There's something we haven't allowed for. We'll have to think it over. Kirk?"

Kirk's voice, uneasy in the receiver, *"Everything works, but not as we expected. Apparently we can shift you and Tony from place to place, and perhaps a little in time. But we have to shift you in time to bring you back!"*

"You shifted us originally from now—your now—to then, as you saw it. All that's needed is to shift us back from your then to your now. The problem's simple. We just have to find the answer."

"But I—I can't think of anything more to do!" wailed MacGregor. *"This shift landed you where there's air to breathe and solid ground to stand on, but—you might have arrived where there was only air and ocean—or neither!"*

The cry that didn't sound like a dog, but also didn't sound like a larger animal—the eerie cry came again.

Kirk's voice, sharp and tense, *"That's a coyote!"*

"We seem to be on a plain," said Tony. "It means what?"

Doug said with marked grimness, "It could mean that when's important! Kirk, give me the dial readings that point to us!"

Tony listened abstractedly. He stared up at the sky. It was familiar enough. There was the Big Dipper. There were the three stars sometimes called the ell and yards—more properly, the stars in Orion's belt. He scanned the sky.

"I see Orion," he said abruptly. "That means it's September or later

where we are. It was May in Johnstown. We moved in time, all right! If I had a star map, Kirk, I could tell you the positions of Mars and Jupiter—I think I see them both—by comparing them with a star map. Let's see if you can do it. I'll aim my picture tube at the sky. Does it pick up stars?"

He aimed the picture tube aloft. After a moment Kirk said reluctantly, *"Not enough definition, Tony. An astronomer couldn't identify anything from this picture tube. We could get the year and even the day from a star map and the place of the planets on it. But how could I get you a star map?"*

"There was a rabbit," said Tony. "It was wearing a little time harness when it was killed and when it was brought back. Put a star map and some sandwiches in that harness and Ann can try to get it to us. Then she can try to get it back to the Tunnel again. When she does get it back, she'll know how to get us back."

MacGregor said distressedly, *"Sandwiches! You must be starving! I'll get you something to eat at once!"*

Being a woman and solicitous of Tony, to be sure, but frantic with anxiety about Doug, the item of food would loom large in her mind. She'd leave the discussion of return to the men, who wouldn't be thinking about sandwiches. She'd work the controls, anyhow. But now her voice broke off. She evidently hurried away. Tony said reflectively, "Those dial settings … We always consider that a thing moves faster when more power is supplied. But maybe that's not true when part of the motion is in time. The same power may move different masses in different directions. Doug and I weigh very nearly the same. We'd be moved to the same place with the same power applied at the Tunnel. We were—to Johnstown. But you moved us together when you tried to take us away from there. Same power, doubled mass. Maybe we moved in a different direction."

Doug said, "We can't risk simply reversing the controls. That could plop us back into the Johnstown Flood—and maybe not into the third story of the Bon Ton Clothiers! Anyhow, this problem has to be solved if the Tunnel's to be useful, on other occasions especially."

"To hell with other occasions," snapped Kirk. *"We want to get you back!"*

"Anyhow," observed Tony, "we've something to try, now. Match the weight of the rabbit with sandwiches and a star map. Send it out to arrive where the coordinates say we are. Then see if the rabbit harness turns up here. We'll have to wait for daylight here, though."

"I'll get it set up," said Kirk.

There was silence. Which again meant many small noises with no particular meaning. Tony, standing in pitch-black darkness, could hear

the sounds around him directly. But he heard sounds from the Tunnel chamber too, where Kirk got ready to prepare a parcel from which to learn how to steer an object in space and time together. Senator Clark talked agitatedly, to Kirk. He was not in a happy frame of mind. It was his horror of the idea of time travel that had made Tony go into the past. He'd intended to prove the Senator mistaken about the implications of a man going back to an earlier period. Now, he and Doug were marooned in a place and time as yet unknown, and the Senator was responsible for the fact.

But his responsibility was of a very peculiar sort. He'd mentioned the idea of a man going back in time to murder his grandfather. In an exact reversal of that paradox, Tony and Doug had gone back in time and saved his grandmother's life. If the Senator hadn't objected to the Time Tunnel, his grandmother would have been drowned at the age of eight and the Senator wouldn't have been born to object to Project Tic-Toc. His objection to what made him exist was the cause of his existing. It was a circular type of reasoning that could be guaranteed to confuse anybody.

"I think," added Tony, "that we may as well sit down while we're waiting for sunrise. Where we are is known, after a fashion, and if Ann's to send us some sandwiches, we'd better stay put where—and when!—we are."

They sat. On the grass. It was stiff and uncomfortable. Tony thought absurdly of the way a dog turns around and around when lying down to go to sleep. The dog's turning bends grass down so the stalks aren't uncomfortable to rest on. It is so ancient a custom of the canine family that all dogs do it, whether there is grass about them or not.

Doug was silent, though apparently thinking busily. There was nothing to say. He'd risked his life against unknown possible dangers to get Tony out of trouble, but it wasn't one of the things one talks about. This present situation—

They seemed to be on a plain or a prairie. In theory it was possible for them to be thousands of years removed from their native time period. Also in theory, it was incredibly lucky that having been moved from their own time to Johnstown in another time, and then away from that into still another—it was astounding good fortune that they were still on the planet Earth. The flood they'd left behind was nearly two thousand miles from where Project Tic-Toc would be some day, and it was nearly a century removed in time. It was probable that this second place and period was of the same order of removal from the flood. It could have been two thousand miles straight up from the surface of the earth.

Or down.

They waited. The stars moved a noticeable distance overhead. The Big Dipper visibly rotated in the northern sky. Small noises continued. Tony found himself wondering what could be the source of a combined smell of carrion and burned hair and scorched wood and hides. Scorched meant fire. Fire meant men. Scorched wood, if this were an open plain, would mean humans also. But burned hair and hides …

There was an explanation which would fit everything in, but Tony thrust the thought away. He could imagine one period, but only one, and only one general area in which all these smells would be found together. The odds against encountering the blend would be considerable, even there and then. But there was no other time-and-place association where they could occur at all.

He didn't succeed in dismissing the thought, but he was very weary indeed. He'd believed he couldn't sleep, but he opened his eyes suddenly and the stars that had been overhead were close to the western horizon and the Big Dipper had turned a quarter-circle in the sky, and a faint, pale light appeared in the east.

Kirk's voice was coming to the receiver behind his ear.

"Tony? Doug? All right?"

"So far," said Tony. But he was again thinking of the explanation for the smell.

"Star maps will be coming," said Kirk, from what now seemed to Tony an incredibly safe and secure and well-defended place. *"And sandwiches. We're holding everything to get a really lightweight scale, or we'd be shipping your breakfast now."*

"Scale?" asked Doug.

"For you to weigh things with," said Kirk. *"If Tony's right about the relationship of power to weight determining the way a thing travels Out Yonder, we have to have the same weight-to-power ratio coming back. So you'll weigh the sandwiches and put something the same weight in their place. We'll send you a rabbit's weight in sandwiches because we know more or less how to handle it now—at that weight and with the power we used before."*

It made sense. It made admirable sense. Tony said, "Better plan on assembling another big harness too—and fast! We may need more than sandwiches before you feel like risking another position shift for us."

Doug said nothing, but Tony knew he felt the same uneasiness for the same reason Tony was less than at ease. Kirk left the microphone.

There was silence. The world slowly faded into visibility. The change was the slightest possible dilution of darkness with the palest

of before-dawn light. There were still very many stars. Venus shone brightly above the eastern horizon. The small, indeterminate sounds of the night seemed to diminish. For a long time—long minutes—there was not a single coyote wail to break the stillness. Somehow it seemed ominous.

Then there was a noise as of drumming in the distance. But it was not made by drums. It was muffled. It moved. From the slowly graying east, the unresonant muttering seemed to move along the horizon until it was almost due south. There it seemed to remain. But it grew fainter and fainter and then gradually died away altogether.

Tony felt an enormous relief when it was gone. He'd made a guess about the smell of carrion and wood smoke and burned hair and hides on a grassy plain. This faint and faraway drumming sound fitted into it in a highly discomforting fashion. It sounded like horses. Like a lot of horses in motion together.

Doug remained silent. He could have made the same guess, and Tony suspected he had. But neither of them mentioned it.

The light grew less feeble. Presently they could see each other clearly. There was blood on Doug's cheek. Tony was startled, and then remembered that he'd been cut by broken windowglass in the clothiers' shop in Johnstown, unquestionably many miles and probably many years away. Presently they could see all their surroundings in detail.

There was sky. There was a grassy prairie, very slightly rolling, which went on to the horizon on every hand. There were a few hills to the west. There was tall grass everywhere. Suddenly there was something small, on wings skittering against the sky. Then there were chirpings and other sounds as if all the world were waking up together. A small white cloud, previously unnoticed, began to glow with a pale crimson light.

Tony said abruptly into his microphone, "Kirk, I want to move a couple of hundred yards. I can come back to this spot on demand. All right?"

Kirk's assent was abstracted. He was working on the assembly of the next planned time unit, which would be more than a one-person harness. It had been intended to follow experimental time journeys in harness, which in turn were to have followed an adequate number of rabbit journeys. It was understood that when the rabbit harness could go back and forth between the time-castaways and the Tunnel, duly matched in weight each way, this new time-travel unit would be tested in the light of the acquired knowledge of how time travel worked. And when it had tested out, then there'd be the full-scale transfer of Tony and Doug to their proper surroundings.

But Kirk—General Heywood Kirk, retired—began to see new requirements. The full-scale time-traveller would carry a survival kit for use in emergencies. There would be an inflatable rubber boat. For the safety of passengers, a time-travel device should have this and that —

There was no end to the equipment that might be badly needed. But it wasn't desirable to leave Tony and Doug indefinitely in an unknown place and time. The fact became specific.

Tony moved away from the trodden grass where he and Doug had spent most of the night. He saw the trails of bent-down grass stalks where he'd moved in the darkness to join Doug. He didn't like to think how conspicuous such a trail was, now. He moved on and found an older trail which was that of a horse. Then others.

As the light increased he saw still more, and then he saw curious objects projecting above the grass. The objects were stumpy and slanted. They did not stand upright. They leaned. They came in pairs. Then he saw what they rose from.

The hard to identify things were suddenly, clearly, the legs of cattle, of oxen, of draught animals that had been dead for some days. Close by, there was an area covered with ash and scorched blackened masses. One glance at it, and Tony knew everything of significance. The ash was what was left of wooden wagons which the murdered oxen had drawn. The blackened masses were heaps of buffalo hides which had been bound together for carriage in the wagons, and burned with the wagons. There were the iron tires of wheels, now burned away to white powder. The wagons had been drawn by oxen and nearly loaded with hides—buffalo hides. The animals had been killed and the wagons and their contents burned. He turned the picture tube to transmit what he saw.

"You see?" he asked quietly of his lapel. "The time must be between 1850 and 1900, probably about midway, and the place is obviously what they used to call the Great Plains."

He was acutely aware that he had no weapon of any sort. He'd imagined correctly what might be the cause of the smell. He went still closer, his lips compressed. Yes. There was a dead man, scalped and stripped. There was another. Two more.

Some buffalo-hunter's party had almost completely loaded its wagons with hides when it was found and attacked and wiped out. The hides, the wagons and the scalped men told when it was, if not exactly where. Buffalo-hunting as a profession began in the 1850's. The herds were gone by 1900. This was the Great Plains at the time of the buffalo's extermination.

It was no longer a guess that the drumming of hoofs an hour earlier

had been a party of Plains Indians on the move. The murdered men and oxen were proof of the situation Tony and Doug were in.

There was a thrashing of grass. Tony whirled. Doug was running toward him. He pointed, and Tony turned again to look.

Above the horizon to the westward there appeared small moving specks. An undulation in the ground hid the greater part of each object, but in a little it was self-evident that the objects were men. They moved steadily toward the spot where Tony and Doug stood.

Doug said bitterly, “Indians!”

10

THEY WATCHED the distant figures after they'd told Kirk at the Tunnel what they saw. They hadn't a choice of action, it seemed. Of course at any time the use of the Tunnel to move them from one place to another could turn out to be a form of suicide. But there were riding men coming over a faraway hillock in the soil. There were dead men within yards of where Tony and Doug stood. Those men had died fighting, but Tony and Doug were unarmed. So they watched the faraway moving specks and Tony snapped a demand that the Tunnel be used to shift them again, no matter what they might run into where it landed them, because it was bound to be preferable to falling alive into the hands of hostile Plains Indians of this period.

The riding men came on. It was Tony who first noticed that they were wearing hats. But Doug first saw the ungainly object behind them, which became a wagon drawn by a dozen draught oxen. A second wagon followed it into view. It wasn't an emigrant train. These weren't emigrant wagons. These were huge freight wains, of the kind that were the common carriers of the frontier for very many years. Their bodies were of wood too thick for an ordinary musket bullet to go through. They would carry five tons of buffalo hides or other freight to and from settlements and trading posts remote from rails and highways. Three miles an hour was a headlong pace for them.

The riders with the wagons brought their guns to the ready. Presently they arrived where Tony and Doug awaited them, their demand for a Tunnel transfer cancelled some while back. The riders halted. The oxen stopped, tossing their horns. A big, red-bearded man on horseback regarded Tony and Doug with an interested curiosity.

"Now, here's somethin'," he observed. "This scalpin' party happened four-five days ago. Huh? Plenty of pony tracks. Comanches, I'd say. Huh?"

"We don't know," said Tony. "We just found them within the hour."

The red-bearded man spat tobacco juice.

"I hearn the owl an' I seen the elephant," he said curiously, "but anything like you two I ain't seen before. Queer clothes, no shootin' guns, no horses. Where's your outfit?"

Tony said, "They left us. We guess they were frightened."

He was improvising. The truth was the last thing to be told to a frontiersman when buffalo hunting was a profession. It would have

been insane to try to persuade a man of this time that they had travelled to a century or thereabouts before their normal time and that their parents weren't born yet.

The red-beard said suddenly, "I know! Y'furriners! Lots of furriners come out nowadays to hunt. Dukes an' lords an' princes an' such. They hire somebody to guide 'em, an' they go out an' shoot a few critters, an' then they go back across the ocean an' say what queer folks the Americans are! You that kind?"

Tony said, as if wryly, "Something on that order. And we're in a fix."

"Y'are that!" said red-beard. "W' headin' for Adobe Walls. Git in the wagon. When we git you there, we'll figger out what t'do about y'."

He rode over to where a dead man seemed to grin mirthlessly at the sky. He had been scalped.

"Died fightin'. Lucky him!" said the red-bearded man. Then he bellowed, "Pedro! Tomas! C'mere! Shovels!"

The second wagon arrived. The bullwhackers—ox-team drivers—of both wagons were Mexicans. There were two to a wagon. One man from each got down to the ground with a shovel. They required no orders. They began to dig a grave for the dead men. It was a custom or a courtesy, according to the point of view. Doug looked suddenly sick. While there seemed to be acute danger he'd been wholly himself, but now that he was no longer apprehensive he was nauseated.

"You furriners," said the red-beard tolerantly, "you're tender-stomached. Git in the wagon like I said."

They climbed together into the huge vehicle. Tony muttered a report to his lapel microphone.

"We're going with them. Naturally! You can keep linked to our harnesses for sight and sound, anyhow. When we know where we are, and when, it'll add to the Johnstown data to be the beginning of using the controls properly."

Kirk said curtly, *"Acknowledged."*

Presently there were organized sounds. Shouts. The crackings of a bullwhip from the seat at the front of the wagon. The huge conveyances began to move again. Gradually, the atmosphere inside them lost the smell it had acquired while standing still. It was again an appetizing blend of whiskey barrels, bacon sides, chewing tobacco and other fragrances. Doug found a weapon in one of the racks on either side of the wagon. It was a Sharps rifle, weighing nearly twenty pounds. It would shoot a bullet the size of a man's finger with a hundred grains of powder behind it. Such rifles were not for use by horsemen, but anywhere they could be used with a rest they were

excellent weapons. They were the instruments which wiped out the buffalo and a great many Indians besides.

Doug looked up from the gun.

"I was thinking of asking Kirk to send us some weapons with the sandwiches we asked for," he said sardonically. "What weapons can he send us that won't weigh more than the rabbit did?"

The wagon went on. In the Tunnel chamber Kirk and MacGregor tried to adjust their plans to the change in the situation of the castaways. Senator Clark gave authoritative orders by telephone to his office in Washington. Almost immediately facsimile replicas of historical documents began to appear in the facsimile receivers of Project Tic-Toc. Tony and Doug were in what to them was a strange world and a stranger time. They needed to pass for natives of the period if not of the place. So information was required to make them seem normally informed about it.

There was the subject of buffalo, the most commonplace of matters where the castaways were. There had been four great herds, of millions each, which moved in stately, seasonally determined orbits upon the Great Plains. They were rather quaintly termed the Northern, the Republican, the Arkansas and the Texas herds. Buffalo hunters shot the Northern herd to a shadow of itself. The buffalo in Kansas had ceased to exist. The Texas herd had become the mainstay of the hunters. A normal spread would be one hunter, two wagons, two skinners and a cook. Along the path the herd would follow, the hunter established himself in a "stand." When the herd arrived he'd kill and kill from the one position until the stupid beasts spooked and ran. Then he'd change to another place of ambush. His skinners stripped off the hides of his victims. Once the killing began, the hunter travelled with the herd, continuing day after day to kill and skin and kill and skin. At the end of the season he went in to Dodge City and spent the money he'd earned. There were about fifteen hundred professional hide hunters, averaging out better than a score of beasts a day. The record kill for one man for one day was up in the hundreds. Tony and Doug needed to know these things to keep from seeming very queer indeed. The Senator ordered and got such information to keep them from seeming aliens.

The wagons stopped only once in a long day's journey, and that was to examine the fresh trail of very many unshod Indian ponies. It was undoubtedly the trail of ponies that had made the drumming noise in the distance just before daybreak. It crossed the route of the freight wagons to Adobe Walls. The riders examined it minutely. There were none of the streaky drag marks of the travois the Indians used when shifting camp. A travois usually carried a tepee or a squaw. There was

no sign of them here. On the face of it, the trail was that of a war party, and a large one.

Senator Clark now acted as if he were a part of Project Tic-Toc, just as he'd more or less acted in the Defense Department. He gave special orders for research on Adobe Wells, all information bearing on it to be sent to the project by facsimile. Tony and Doug were going there. Adobe Wells had an exact geographic position. Their arrival would mark an exact point in time which was coordinated with that position. The instrument-readings when they—with their time harnesses sending a signal to the Tunnel—entered Adobe Walls would add to the facts known about time travel. With a few sets of such coordinates, it would be possible to compute control settings for any place or happening anywhere in the cosmos. And when they knew how to move objects by known amounts along known coordinates—why—then the Tunnel could begin to function as it was designed to.

But information about Adobe Walls was scattered and sparse. MacGregor found one item in the lavish supply of facsimiled source documents. It was to the effect that a not too outstanding Comanche chief, White Shield, was "killed in the fight at Adobe Walls." There was no more information than that. Later Senator Clark himself found in a facsimile sheet the statement that Bat Masterson, gunfighter and friend of Wyatt Earp and Doc Holliday, had been "in the fight at Adobe Wells." More facts were certainly available, but they did not find them.

MacGregor and the Senator searched for such information. They had Sam Creighton at work on it too, drawn from other duties in the project besides that of meeting a helicopter when—rarely—a visitor was brought to the Project. Then Sam Creighton made use of a very fine talent for preventing such visitors from having the least idea what the project was about. But now he searched among reams of printed sheets for references to Adobe Walls.

Kirk did no such research, but he was busiest of all. He'd considered that it would be wiser to use a single, oversized time-transporting unit than two one-man harnesses for the return of Tony and Doug to the Tunnel chamber. The design for such a thing was completed, of course, long before it was planned to make or use one. Kirk began the assembly of this ambitious time traveller. It would carry much emergency equipment for use if something went wrong, but not wrong enough to kill the two Out Yonder, instantly.

Then the tiny scale arrived by air, and with it he could equip the rabbit harness so its weight would always be the same, going or coming. Data to be had from a working shuttle service would be invaluable for the larger device. Kirk put aside the latter development

to complete the lesser one. Then MacGregor said in an unhappy voice, "Tony's and D-doctor Phillips' time harnesses have picture tubes so they can show us what they see. Shouldn't we have one on the little harness? Then we could see what we were doing in trying to get sandwiches to them."

Kirk swore softly under his breath. It was obviously true. A blind time-travel robot like the rabbit harness device could become many times more useful if equipped with eyesight—with a picture tube. He built one into it.

"They're with people," he said grudgingly of the two castaways. "So we don't have to think about sandwiches. They'll eat! And we can find them easier and learn more all around. You tell them."

MacGregor caught her breath. But very shortly afterward she was talking very composedly to Doug, then the better part of a century and nobody knew how many miles away.

It was curious that after a perfectly businesslike talk with Doug, MacGregor found it necessary to wipe her eyes.

Nothing in particular happened from that time until near sunset—at least nothing of which Tony was aware. He tried to talk to the Mexican bullwhackers. Their English was limited. He learned that the wagons belonged to the Sheidler brothers and carried freight from Dodge City to Adobe Walls and back. They'd be loaded with buffalo hides at Adobe Walls this trip. Yes, they'd had brushes with hostile Indians, but not this trip. The red-bearded man was one of the Sheidlers. The other—communication broke down for lack of an English vocabulary.

The sun sank low. Doug had an instant's hope that the time of sunset might help in the operation of the Tunnel, but they'd have to know the date for it to mean anything. Also, they'd have to know the height above sea level. But even that wouldn't have made a good observation possible. There were hills to the westward along here. The time of the sun's disappearance behind them would be meaningless.

There were hollows in the ground surface, now. There were spots where erosion had left patches of visible bare clay. The wagons followed a bare trace of other wheel tracks on the ground. Gradually, hills closed in on either hand. The two great wagons rolled and lumbered in hollows that would conceal them from any eyes a mere half-mile away.

Senator Clark's voice came sharply through the headphones.

"I've got some information," he said precisely. *"I asked for all possible data on Adobe Walls. My staff in Washington found this in a brochure on the state parks of Texas. Quote: 'Adobe Walls Memorial Park. This was the scene of a desperate attack by Plains Indians under Quanah Parker upon*

the Adobe Wells trading posts as the first step in a plan to wipe out the buffalo hunters who had already wiped out the northern buffalo herds and were now decimating the Texan. The attack would have been a total surprise and almost certainly a success but for the still unexplained breaking of the log ridgepole of the largest of the trading-post buildings. This happened some hours before sunrise and waked the occupants of that store, preventing the attack from finding everyone asleep. Even so the leadership of Bat Masterson, who had arrived the day before and was to have left the next day, was a decisive factor in the defense. If the attack had succeeded—' "

He stopped as if in triumph. But Tony could not see anything remarkable in the news. He said, "I can't see that it tells us anything —"

He'd spoken aloud. One of the bullwhackers stared at him. Tony broke off, turned his head, and only murmured the rest of his reply. He looked out of the wagon.

There were stupendous colorings in the west. Now, too, there were small trees to be seen here and there. The hollow down which the wagons rode became filled with shadows. As the great, lumbering vehicles went on, the first faint stars appeared. The sky turned a deeper blue. The wagon came out of a low range of hills and there was almost night before it. There was definite darkness where cottonwoods grew beside a here-invisible brook, and there was a tiny rectangle of yellow light. It was a window in one of the three log buildings which made up the settlement.

There was absolutely nothing to indicate that anything out of the ordinary would ever occur here. There were just the three crude but solid structures, not far apart. They were three different enterprises, hide-buying establishments all, with store goods and whiskey and ammunition for buffalo hunters who came in to break the monotony of life by visiting a metropolis of as many as two dozen inhabitants. The stream flowed not more than two hundred yards from the buildings. It possessed a grandiose name. It was called the Canadian River. Cottonwoods almost hid it from sight. One of the log buildings was the store called Hanrahan's. Another belonged to the partnership of Wright and Rath. The third emporium belonged to Leonard and Myers.

These factual details were not known to Tony at the moment. The importance of Adobe Walls to him was simply that it should be a place where he could eat and find presumable safety while his friends got ready to get him back in the Tunnel. That was all.

The wagons went down the last incline. They stopped before Hanrahan's. Whiskered men came out to greet them. The two Sheidler

brothers and their accompanying riders went into Hanahan's for refreshment. The bullwhackers took the draught oxen and ridden horses to the corral not far away.

Tony went in the store. Illumination was tallow dips stuck in bottles. Man-high stacks of buffalo hides stood against one wall. There was a counter with merchandise behind it—the assortment was strictly limited—and against another wall there stood a row of barrels, duly racked for convenience, and each one with a wooden spigot inserted and a dipper hung hospitably nearby.

The store smelled. Buffalo hides were never fragrant. The habits of the plains did not include a fanatical devotion to baths. The candles were not odorless. But the red-bearded Sheidler thrust Tony cordially to the row of barrels. They drank together. Others joined them, casually or otherwise. There was no bartender nor any cash register—of course—and apparently no charge for the drink. Men brought in the cargo of the two huge wagons. Sheidler, booming humorously, led the way out and to the next store.

"Vittles," he explained to Tony. Doug was somewhere unseen, cheerfully and cordially accepted in his role of a foreigner who'd gone hunting on the plains and been left behind when his guides fled because of Indian signs or with the simple intention of robbing him. To have insisted on an accurate account of themselves would have been simple idiocy.

In the second log building, no more brightly lighted than the first, Tony saw a girl. She was keeping a fire going and from time to time she stirred an enormous pot of stew. There was a great haunch of buffalo meat close by. The girl nodded cheerfully to the red-bearded Sheidler and filled huge platters for him and for Tony.

"What on Earth—" asked Tony.

"Her name's Elena," rumbled Sheidler. "A widder-gal. Her husband lost his hair last year.* (A slight liberty has been taken with historic fact here. —M.L.) She does the feeding. Runs a restaurant, you can call it."

She was satisfying to look at. Her features were good. She'd have been called pretty in any case. But she was also a person. She was an absolutely extraordinary person to be found here. And Tony had much on his mind, but he found himself staring.

Doug came in presently with new-found friends enormously whiskered and relaxed. They led him to the food supply. Neither he nor Tony had eaten in something like sixteen hours, and they were both ravenous. But he made his way to Tony and between mouthfuls of the stew—made with unfamiliar meat; buffalo—he said under his breath, "Bat Masterson's here, I met him."

Tony did not react. He found himself looking at the girl Elena. She

couldn't have been more than nineteen or twenty, she'd been married and widowed and now cooked for certainly not-refined buffalo hunters and the like. But she wasn't a cook. She was the hostess of a hostel in Indian country. She was composed and pleasant and friendly, and it occurred to Tony that any man in Adobe Walls would fight to the death to protect her, and none would think of her as they thought of the women they'd seek out uproariously when they got back to Dodge City.

"Tony!" insisted Doug. "Don't you see what that means? Bat Masterson's here! I saw him!"

Tony was bemused. He'd slipped his receiver from behind his ear down to where it would be less noticeable. He and Doug were the only men in Adobe Walls not wearing hats. Moving the receiver was a reasonable precaution, but he'd expected the stores to be better lighted inside. Doug hadn't shifted his receiver so he was in touch with the Tunnel. Tony wasn't.

"Don't you see?" demanded Doug angrily. "He got here yesterday and he's going on tomorrow! He was—he will be here when the fight at Adobe Walls takes place! When the Indians attack the place! That means tomorrow, before sunrise!"

Tony shook himself. Then he said, "They won't win. And Bat Masterson will live through it."

"The question," said Doug angrily, "is, will anybody else? And if so, who? It's going to be a tight squeeze! Somebody's going to get killed! It could be us! And—we know what's coming! How the devil can we convince these characters that there's an Indian attack coming before sunrise? So they can put up a better fight? Some of them will live through it, but will we? What can we do?"

Tony's eyes went to the girl. She was smiling at something a whiskery buffalo hunter had said. This was not a commonplace state of things. It was a singularly frustrating state of things, because they couldn't tell how they knew what they did, and they couldn't know what the consequences to themselves would be. But—and somehow the girl Elena was markedly in Tony's thoughts—this was no time for men who could pull the triggers of guns if they could borrow them to risk a time transfer. A transfer would be deadly dangerous in itself. But even more importantly, every man who could handle a weapon was going to be needed here. If for nothing else, to protect the girl Elena. A white woman captured by a war party of Plains Indians …

11

THEY WENT outside, soothed in their stomachs by the hot stew they'd eaten and the conservative drink from a wooden-spigoted barrel after it. But they felt good only physically. Voices came to Tony when he'd pushed the bone-conduction receiver back into place. The first voice was MacGregor's. She was saying desperately, *"General Kirk has a picture tube hooked in to the rabbit harness, but he can't add anything else and have the weight exactly right! So if we have a picture tube we can't send you—anything! What shall we do?"*

"Send it," said Tony, firmly. "We need the information for the Tunnel's use. But meantime it might serve as a drone scout for the fighting here—if it comes. You try to get it here. You should be able to spot the stream if you have a picture tube. It'll be darker than the plain, and there are trees alongside it to make it more visible still. If you can find such a stream indication and follow it down, maybe you'll spot a lighted window, which will be here."

To Doug, Tony said drily, "And if against all reason there is an Indian attack, it'll be like a drone model plane. It can fly and see and report—or it should be able to. If Ann can handle it with a picture tube like she handled it with a rabbit in it, we'll have air observation."

"Not at night," said Doug grimly. "Daytime, yes. Maybe!"

MacGregor's voice, shaking, "The general thought of that. He's all ready. We're trying to send it—now."

They waited. The Tunnel chamber microphones picked up the loud humming of the power supply. Then there was a crashing sound. Something should have gone out of the Tunnel—gone Out Yonder. Then there could be only waiting to find out what had happened. There were sounds of festivity within the three log structures which were Adobe Walls. There were the night-noises of the wild. Here there were trees, and therefore more noises than on the prairie itself. If the time-travel harness with its picture tube could be maneuvered like the same harness with a rabbit in it, but blind—why—it would be a great advance toward the full and proper functioning of the Tunnel, But it couldn't make a decisive difference in the immediate situation.

The whole importance of Adobe Walls lay in the fact that buffalo hunters began their killing not far away. From nearby to the northward, Buffalo-hunter spreads abounded, all of them busily exterminating the meat animals on which the Indian way of life depended. Horse Indians relied, on buffalo for food while they

travelled. War parties could cross the continent, given buffalo to kill and eat on the way. They very nearly did. Every man, woman, and child murdered in the crossing of the Great Plains found death because of the buffalo meat which supported hostile Indians where there was no other food. General Phil Sheridan had vehemently assured the Texas legislature that the buffalo hunters, by killing off the shaggy beasts, had done more to settle the Indian question in two years than the entire United States Army in ten. President Grant later refused to sign a Congressional bill to protect the buffalo for the same reason.

And not only the United States Army knew it. There was Quanah Parker, war chief of the Comanches. He was the son of a captured white girl-child and the Comanche chief she later married. He saw the subjugation of the Indians as bound to follow the wiping-out of the buffalo herds. He'd gathered together thirteen hundred warriors from four tribes in the greatest war party ever known before the battle of Little Big Horn. He'd designed a master plan by which the Indians could save the buffalo and themselves. For the first time an Indian fighting force would have a purpose beyond massacre and a strategy that made sense.

He'd had his followers rendezvous near Adobe Wells. If they wiped out that trading post and kept any word from going south to a telegraph sender, he and his unprecedented war party could sweep northward, with no warning of their coming going on before. The buffalo hunters, killing thirty thousand animals a day, were in scattered parties never more than four or five men strong. Such parties against such an Indian force could be wiped out with hardly a pause in the war party's progress. The professional hide hunters could be exterminated—instead of the buffalo.

If that succeeded, the frontier settlements would be doomed. The Indians could raid ruthlessly, with buffalo for commissariat. If this grand strategy were carried out, it would delay the white settlement of the middle of the United States by at least a generation. It would cost thousands of white lives. It might make the settlement of the West too expensive for the whites of that period to attempt.

But the killing-off of the buffalo hunters had to begin at Adobe Walls. No white must survive or escape to get the news away to be spread by the white man's telegraph. This was the one crucial point in the grand plan, which was the most brilliant and far reaching any Indian leader had ever tried before.

Tony and Doug didn't know it. The inhabitants of Adobe Wells did not dream of it. There had never been a hostile act against this trading post. Naturally, it seemed there never would be.

So Tony and Doug stared out from the blackness around the trading-post structures. They saw many stars. The night was so still it seemed at times that they could hear the rippling of the four-yard-wide Canadian River.

What significant action took place was in the Tunnel chamber, and outside where a very small time-and-space traveller was operated from beside the Tunnel. The intricate web of steel and copper gave off a wavering, flickering, pulsating glow. There was a humming sound as of an infinite amount of power at work. Presently there were noises from the loudspeakers on one wall. They were essentially the same sounds that Doug and Tony heard outside the door of Wright and Rath's log-built store. The former rabbit harness was now a drone explorer of time and space. It was—somewhere and somewhen. The television screen in the Tunnel chamber showed only vague variations of dark and less-dark. MacGregor turned knobs and watched dials, and glanced at the screen. Indefinite differences of darkness on the screen moved back and forth. The miniature time-travel instrument floated in midair, its movements governed from the Tunnel's instrument board on the desk before MacGregor, who acted on the reports of a tiny picture tube.

It was luck, but presently Kirk said sharply, "Hold it!"

There was a streak of real blackness against the surface shown on the screen.

"That could be a stream," said Kirk. "Can you go down to it?"

MacGregor tried this control and that, very, very tentatively each time. The dark area spread. Presently there was the sound of foliage in gentle, whispering motion.

"Let's trail it," said Kirk. "Follow it down."

MacGregor found out which control, handled delicately, made the television image move the way she wished it to. And then, suddenly, there was a speck of light. It appeared and disappeared exactly like a door which opened to let someone in or out and then closed again. That was, in fact, exactly what it was.

MacGregor took a deep breath. She watched the television screen with weary but resolute eyes as she moved one small knob after another.

"The rabbit harness is working better than I expected," she said carefully. "I think I can go right up to those buildings."

There were angular shapes visible on the screen now. They were not detailed. There was practically no light. But they had square corners. They were rectangles. They could be nothing but buildings.

Tony said into his microphone, "Nothing from here, Ann. It looks

like it's not working."

But MacGregor's voice said agitatedly, *"The loudspeakers brought your voice then, Tony! The harness is close! Very close! Make a light!"*

Tony struck a light. A small flame burned in the blackness of all outdoors. MacGregor made an inarticulate sound. Then, minutes later, Tony jerked his face skyward. And there, black against the stars, something very small and absurdly shaped floated like a black bubble in the air. It looked like a small pillow with straps around it. It floated waveringly, and gradually descended to about head height. Tony found himself automatically refusing to believe it. But Doug touched it with his hand. It seemed to bounce away and then return.

"The Tunnel," said Kirk, gratified, *"actually works!"*

"And now what?" asked Doug. "This proves something, but what for the state of things here? We can't risk another time transfer! Also—"

"Also," said Tony quietly, "we're needed here. If there are any extra guns we're needed here to shoot them. We were needed in Johnstown, as Senator Clark will agree. We're needed here! Anyhow—"

MacGregor protested, *"But I've got exact coordinates for you now! I've worked out the control settings for movements in time, and for the other directions in space. I don't know which of them is exactly what in terms of north and south and so on, but I do have the actual control settings that will bring the rabbit unit back to the Tunnel. They ought to bring you—"*

The door of the store opened, only feet behind Tony and Doug. They didn't speak. The tiny floating thing dropped to the ground and immediately was invisible. Somebody came out and Doug recognized him. He said quickly, "Mr. Masterson!"

Silence. Then a grunt from the broad shape of the other man.

"The Britisher, eh? Lord something?"

"I've something to tell you," said Doug, earnestly. "My friend Tony, here, has a sort of gift. Sometimes he knows what's going to happen before it does. It's a feeling. He's got that feeling now. He's just been telling me. He feels Indians."

The voice of Bat Masterson was skeptical but polite.

"Second sight, eh? I never knew it to work out. Hunches, yes. Second sight, no."

"Call it a hunch," said Doug urgently. "There's going to be an Indian attack on this settlement, come sunrise. Tony knows it! He doesn't know how he knows, but he's sure! And—it'll happen! There'll be an Indian attack before daybreak!"

Bat Masterson sounded amused.

"He knows things before they happen? How come he didn't know your guides were going to light out and leave you on foot to be killed

and scalped by the first Indian who came by? Did he know the Sheidlers were going to come along and pick you up?"

Doug stammered.

"Some people believe in that stuff," said Masterson tolerantly. "I don't. Better go inside and have a drink and go to sleep."

He moved away in the darkness. He went into Hanrahan's. Doug said angrily, "Damn!"

MacGregor's voice.

"We—the General and I will see what we can learn … We'll be back. No, of course we don't need to be back but—"

The feeling of frustration was almost a tangible thing. To know what was going to happen, and to be involved in it whether or not one wished to be, and to be unable to influence events—it was intolerable! Somebody was singing inside Wright and Rath's. There was a rhythmic clapping of hands and a roared chorus from Hanrahan's. The amusements of buffalo hunters were apt to be of the crudest sort. At a trading post there could be only the simplest diversions. Mostly they were completely innocent, though when the hunting season was over the dives and gambling houses of Dodge City were remote at least from innocence.

Doug said abruptly, "I'm going inside and try to stir up something, anyhow! The Sheidlers must have told about the Indian murders where we met them! That wasn't twenty miles away! Those wagons were probably headed here!"

Tony did not answer. He was thinking of the tiny harness, now made into a flying drone for what might be called scientific research which had to be done to return them to their own time. But it couldn't be used for that now. It was now trying to locate an Indian war party told of in a glossy-print brochure on state parks which would be printed something like a hundred years in the future. Even the printing processes which would make it attractive did not now exist. This was a wild divergence from the rabbit harness' original purpose, and Tony was by no means sure it would accomplish anything. But he had a definite idea in his own mind of what he and Doug would have to do.

They'd gone back to Johnstown and saved Senator Clark's grandmother from being drowned as a child. Which was a paradox, because the Senator had been fiercely an antagonist of the enterprise. Now they were in Adobe Walls, and if random chance did not take charge, they'd have to take history for a blueprint and bring about an event that history said took place, but which very, very probably wouldn't unless they made it. He considered the paradox with some wryness.

"I'm going to try to stir up some uneasiness, anyhow!" said Doug restlessly. "Masterson wouldn't listen. Maybe I can get somebody else to listen to another angle. Are you coming?"

"Ann and Kirk will want to report," said Tony. "I'll wait."

Doug went inside the log store. Tony knew exactly what he'd try to do. He guessed the result. Doug would talk about the hide hunters they'd buried that morning. He'd talk about the rumbling of hoofs both of them had heard just before sunrise, and the broad trail of a strong party of Indians without squaws which had crossed the wagons' course. That party alone would be dangerous to Adobe Walls, if there were no watch out for trouble.

But Doug wouldn't rouse anybody's belief. Senator Clark had read from a brochure of almost a century before that the hunters at Adobe Walls hadn't expected an attack, and that some of them were fortunately awake for a ridiculous, inexplicable reason. Tony knew the reason. It was preposterous for it to be his and Doug's doing. It would be the most paradoxical of possible paradoxes. But it looked like that would have to be the way things were.

So he stood in the darkness and waited, and listened to the hrrrmphings of horses in the corral and the other noises the oxen made.

He found himself thinking about the girl Elena. He frowned at himself for thinking of her. He forced his mind back to the Time Tunnel. MacGregor and Kirk would be very weary, but they wouldn't turn things over to Sam Creighton and the Senator to run. MacGregor was firm that only she should work the Tunnel controls. She wouldn't turn them over to anybody else. The Senator would be fuming because his own firmest convictions on the subject of time travel had been forcibly changed. He was not able to use his authority to change the convictions of anybody else.

Tony found himself thinking about Elena again.

MacGregor's voice came through the receiver behind his ear.

"Tony! D-doctor Phillips! We found them! General Kirk picked out a sound I didn't notice! We managed to track it down! We got the harness close! They're on the far side of the stream! There are hundreds and hundreds of horses gathered together! The general says thousands!"

Kirk's voice came, clipped and disturbed.

"Not thousands, but I'd say at least one thousand. We floated the harness down close over their heads. They're Indians, all right! They're armed. That's certain! They're waiting for something, which is probably the time for them to move on toward you. They're staying well away for as long as anybody's likely to be awake where you are, so there'll be no chance of even a scout being spotted."

Tony said to the emptiness around him, the dark, almost featureless surroundings of the three-building settlement, "I wish I had half a stick of dynamite. But the books say it happened, so I suppose I'll manage to do it."

"Can we do anything?" asked MacGregor desperately.

"I suggest," said Tony, "that you get some sleep. We can't gather data for Doug's and my return while it's still dark. Here I'd guess it was about nine o'clock. Again I'd guess that the attack won't come before four, and five is more likely. Get some rest. We may need the rabbit harness to do sentry duty, later."

"How could I sleep?" demanded MacGregor despairingly.

"The fight," said Tony, "will not end in everybody here being scalped. We have history's word for it. Neither Doug nor myself is going to try to be a hero. Just one question: Kirk, how do you dum-dum a bullet?"

Kirk told him. He promised grimly that MacGregor would get some rest. He'd make her. She should be rested and at her most competent if she were to operate the pillow-shaped flying object which had been intended for experiments in a space-time continuum, but was now to be used as air reconnaissance against hostile Indians of some time between 1860 and 1900.

Doug was in Hanrahan's, talking hotly to whiskered buffalo hunters. They nodded and agreed placidly that Indians were bad neighbors. But there were twenty-odd white men in Adobe Walls, and all of them were well armed and they had plenty of food and whiskey and ammunition. The Indian's knew it. They'd stay away.

Tony saw the red-beard, Sheidler, booming humorous comments on the world in general. The cargo of his two wagons had been brought into Hanrahan's. The four Sharps rifles had been brought in from their racks in the wagon bodies. They were leaned up against piled-up boxes of chewing tobacco. Boxes of ammunition were close by.

Later, Tony was in Leonard and Myers' store. He wanted to see the girl Elena again. He was annoyed that she seemed so peculiarly absorbing to think about. He watched from the badly lighted background of the store's farthest corner. Presently she yawned frankly, smiled generally at those present, and went up a ladder to her private sleeping quarters close underneath the roof.

Tony grew restless. He expected nothing to happen for a long time yet. Presently he went back into Hanrahan's. He didn't see Sheidler now, but it did not occur to him to wonder where he was. He inspected the roof from below it. The walls were giant logs, two feet in diameter or more. Windows cut through them were almost small corridors because of the wall's thickness. The roof was unsquared

beams—rafters—resting on the walls and a ridge-pole in the center,—with a good foot of buffalo grass sod on top. Earth had trickled down between the rafters, and some of it clung to threads from the sod, so that the ceiling looked almost like untidy gray fur.

Doug came to Tony, his lips tense.

"Nobody listens!" he said bitterly. "If there is an attack—and there will be—there'll be no chance for anybody to get out of it alive!"

Tony said, "We could go out into the corral and ride away. The Indians are on the other side of the stream. We might be followed, but we might not."

"Try it if you like," said Doug coldly. "I won't!"

"Nor would I," agreed Tony. "We know everybody won't be killed here, but we don't know that two men from the future escaped before the fight. Have you a pocket knife?" Then he said, "The ridge-pole has the devil of a load on it. It's bent a little in the middle from the weight of the sod roof. Notice?"

Doug said, startled, "But we can't do that! We're—from another time! We—"

"Ask Senator Clark," said Tony.

Doug hesitated. Then he handed Tony his pocket-knife. Nobody paid any particular attention to them. They were accepted now, and no longer objects of curiosity. The buffalo hunters talked largely, wide and free. Now and again they drank. But white men did not react to whiskey as Indians did. The Indians never understood it. White men drank and were sometimes drunk, but no white man was so intoxicated that he couldn't be roused for needed action. When an Indian was drunk he was drugged. Hopelessly.

Tony labored on a bullet he'd casually removed from one of the Sheidler's Sharps. It was very slow and tedious work. It took him half an hour to cut a suitable deep notch in the bullet. The sounds of conversation and occasional song died down. Men stripped off hairy outer garments and casually reposed—many of them on the bales of buffalo hides, whose odor was not in the least like violets. Some of the candles guttered, and others bent over and dripped and then flared up brightly for a little space and went out. Eventually all was silence. Only Tony and Doug remained awake, and Tony painstakingly cut a second notch in the first bullet and a first notch in another. When he was finished, only a rag floating in tried-out fat remained for light anywhere in the store.

Hours passed, and it seemed like years. Then Tony said evenly, "It's about time for us to take action, Doug. In Johnstown, we did something that proves the present always has all the changes in it that the past can make. Now we'll do something in which we assume that

the present can make things happen in the past. Specifically, we've got to produce something that history tells about."

Doug frowned. Tony put a loaded Sharps buffalo gun in his hand. It was extraordinarily heavy. Tony pointed with his fingers to a particular spot on the ridge-pole. There was a knot there to mark it as a target. It was the place where the bending of the ridgepole was greatest.

There were snorings all around. Tony found a rest for his Sharps. Doug, scowling, found another. Tony said carefully, "One, two, three!"

They fired together. It sounded like a single explosion, and in the massively walled store building the report was that of a cannon. Two deeply notched bullets hit the ridge-pole where it was most heavily burdened and already sagged under the weight it bore. With a crash which echoed the original explosions, the ridge-pole bent down. It sagged a good third of the way to the floor.

There were roarings. Men sprang up, half asleep, groping for weapons. There was overwhelming confusion. Then Tony shouted that it was the ridge-pole that had broken. Two notched bullets with a hundred grains of powder behind each of them had made a critical difference in the ridge-pole's strength. It sagged, and it seemed that it should collapse completely any instant.

But these men were highly practical. The massive timber actually might break further. But it might be propped up for the time being.

Men went outside in startlingly lurid red flannel underwear and came back with an eight-inch log. It happened to be of an appropriate length. Every man in Hanrahan's, including Tony and Doug, set matter of factly to work to brace the ridge-pole against further settling. They even managed to raise it a few inches from the lowest point it had reached.*

*(The actual ridge-pole in the actual Hanrahan's store did break at just the time and to the effect described above, with the actual consequences which follow. There has never been an explanation—rather, this is the only one ever offered. —M.L.)

Then they were wide awake. Nobody felt like going back to sleep again. Somebody made a fire. There would shortly be coffee for everybody. The occupants of the store sat around, discussing this and similar false alarms. The coffee boiled. It was of corrosive strength. Everybody drank a mug or two of it.

Tony said in a low tone to Doug, "Maybe it would have broken anyhow. But nobody ever did know why it did. My guess is us. Now we'll see what happens."

Apparently nothing was to happen. There was the beginning of false dawn outside. Tony went to a window and looked out. Nothing. The tremendous stand of cottonwood trees by the rivulet called the

Canadian River—nothing. There was the faintest conceivable graying of the ground, but nothing happened. Tony looked at the nearest building. The girl Elena was in it. It was merely a dark, angular outline.

His throat ached with pure nervous strain. This was the time Indians preferred to attack. They'd have left their horses and approached on foot. The settlement was surrounded now, certainly. At any instant—

Then Tony saw something to make the blood run cold. Somebody had gone out of Hanrahan's. He'd left the door open. If Tony had seen in time he'd have tried to stop them, at any cost in ridicule. Now he flung himself at the door to shout to them to come back. He got outside and saw them. They were already fifty yards away. It is a matter of history that one of them was named Billy Ogg and the other was William Tyler.

Tony shouted frantically for them to come back. Billy Ogg halted. He called a question. William Tyler said something indistinguishable and went on toward the corral. The only sounds outside of Hanrahan's were those plaintive before-dawn noises to which nobody pays any attention. The grass was gray-white with dew. Condensed moisture dripped from somewhere and made distinct plopping sounds as it fell.

Then a gun exploded in the cottonwood timber not far away. The stillness shattered. It broke into a thousand bits. There arose such a hellish outcry that the cottonwoods rang with it and the hills flung back echoes. The whole edge of the timber came alive. It rushed toward the store buildings with gun flashes and a ghastly ululation going on before.

Billy Ogg stared for the fraction of a second at the moving tide of murder. Then he made for Hanrahan's in monster bounds. Swarming dark bodies raced after him, yelling. A gun went off close by Tony's ear. Indian bullets thudded into the logs beside him. Billy Ogg, running in gigantic leaps, made a dive and plunged through the door and into the building. Somebody dragged Tony back. The door banged shut and a bar went across it. Tony stumbled. He went down. He had an instant's photographic sight of the inside of Hanrahan's, all raw logs and utter crudity, with the piles of buffalo hides against one wall and the row of whiskey barrels opposite them.

There were ten men in the building when Tony got to his feet again. Two of them were already shooting out the windows, so narrow that only one man could use them at a time. Three more men scrambled for weapons. A huge, whiskered man swung monkeylike for the rafters overhead. A gun belt with two single-action revolvers dangled behind him. Two other men feverishly added braces to the door.

Then the attackers hit the building. There was an actual, perceptible

impact of their bodies against it. Tony fumbled for the Sharps he'd fired once before. It belonged to the Sheidlers. He kicked open an ammunition box and filled his pockets while somehow simultaneously reloading. A gun flash came in a window and a bullet screamed past him, but it could not be heard. A man drew back from a window, cursing his emptied weapon. Another man took his place. Bellowing explosions sounded overhead. The man in the rafters had forced an opening in the sod roof and fired from there down upon the clamoring figures below. Bullets made snapping sounds, hitting the logs. Above all there was the shrieking, screaming pandemonium of war whoops.

The Indians of four tribes fought frenziedly under Quanah Parker today; fought for everything men ordinarily fight for, and most of which was being progressively denied them. The whites inside Hanrahan's store fought for their lives. It was white-man-style fighting, which is a berserker frenzy tempered by common sense.

Tony and Doug were included in the fighting because no other behavior was possible. They loaded and fired and loaded and fired in the darkness of the store. It seemed that no sound not of deadly combat could possibly be heard. But the bone-conduction receiver behind Tony's ear passed queer noises through all the tumult. It was MacGregor. She was sobbing.

She was not weeping over Tony.

12

THE LOG walls held and guns bellowed, and bullets made separate-sounding impacts when they went into flesh and when they shattered bone. There has never been any reason to question the courage of the American Indian. There was no reason to question it now. They tried to jam themselves through the windows in the two-foot thick log walls. Rivals for reputation dragged each other from the places of greatest danger, that they might take those places for themselves. But from the sod roof bullets tore down into the struggling mass of assailants. From inside, the defenders shot at the windows rather than out of them, and the results were murderous. The defense of Hanrahan's was pure desperation. But the attack on it, considering everything, amounted to madness.

It became self-evident to the Indians. The attack suddenly melted away, not as abandoned but so the attackers could attack an objective not proved hopeless. There was Wright and Rath's, for example. Hanrahan's was defended by men who were awake and armed and infuriated. But in Wright and Rath's, and Leonard and Myers', the men had all been asleep. Nobody was on watch. The doors were barred, but that was all. The Indians who left Hanrahan's rushed to attack the other buildings. They actually obscured the walls as they tried to tear them down bare-handed, as they tried to splinter the doors with gun butts and chopped at them with tomahawks. Those tomahawks, incidentally, were of good steel and had been especially manufactured for the Indian trade by Eastern manufacturers. And one log in Wright and Rath's was loosened by the bone-cracking efforts of warriors to pull the building down. But there were plenty of fighting Indians using guns, and the windows were literally choked by warriors trying with an insane valor to crawl through and come to grips with the defenders.

For an unbelievable length of time there was absolutely no obstacle to the entry of fighting Indians except their rivalry to be first. The doors did withstand the tomahawks and gun butts. The loosened log would be moved only so much, and then wedged itself fast again. Only one Indian actually got through a window into Wright and Rath's store in this first struggle. He whooped in the darkness there, and a whiskered, cursing, newly wakened hide hunter grappled with him. The Indian was oiled and armed and frenzied. The buffalo hunter was clad in the red flannel underwear in which he'd slept. That

struggle ended with the Indian strangled.

It look long seconds for those in Hanrahan's to realize that they'd driven off their attackers. Then they poured out the door they'd fought so savagely to keep closed. Wright and Rath's was only twenty yards away. It was almost hidden by yelling figures. The guns from Hanrahan's flung lead into them in the dusk of very early morning. In the open they could fire all at once and individually faster. The occupants of Wright and Raths' were still fumbling for weapons when the new gunfire began. Frantically bloodthirsty attackers still choked the window openings. But at long last they opened fire and cleared the windows, and then they killed without mercy.

Seconds later the sounds of buffalo guns came from Leonard and Myers'. The Indians had an incredible advantage in opportunity as well as in numbers. But every Indian fought only for his own glory. Two more got into Wright and Rath's—they did damage and were killed—and three into Leonard's, of whom one was dead before he hit the dirt floor inside, and the other two died shortly after.

Then the whole attack on Adobe Walls wavered. Under fire from front and back, jammed in the windows of the buildings—and they had counted on getting through those windows—and butchered by raging men hidden by darkness in the stores while the attackers were increasingly revealed by the developing dawn, the Indian attack faltered. It was frustrated by their own number, plus the fact that the windows were like tubes to the interiors of the stores, through which the defenders could shoot at will. The attack was hardly more than a mob action, and buffalo-gun missiles did not often stop in the first flesh they tore through. No bullet fired out a window could fail of finding some mark. And panic spread as the semidarkness lightened.

Suddenly, there were dark figures racing away from the buildings, urged on by gun flashes from the windows. Those who ran dived into hiding in the timber and other hiding places. Wounded men moaned. A crippled horse screamed somewhere. But the first attack had been a failure.

Quanah Parker, Comanche chief and originator of the master plan, was not to blame for this setback. He'd wanted to tell off-parties of chosen warriors to creep close to the windows of the three hide-buying establishments. He'd wanted them to slip through one by one, causing no alarm until they had unbarred the doors for their fellows. But he could not order such tactics. Even his subordinate chiefs, White Shield and Lone Wolf, would not back such a scheme. It was a fixed principle that no warrior could be given special opportunity to do murder. The attack had to be a scramble. Quanah Parker could not advance anyone before his Comanches. They were too fierce. Nor the

Arapahoes. They were too ardent. Cheyennes were too proud. The Kiowas would not yield first place to any.

So the first attack ended and presently there was silence save for small groanings and the screaming of a wounded horse. Eventually that ceased.

The quiet was astonishing. Even more astonishing were the clean smells of morning when the sky grew bright and the reek of burned powder drifted away and the odors of blood and death were not yet disturbing. But there was enough to be disturbed about.

Ten men had slept in Leonard and Myers' store the night before. Now there were eight alive. Eight had bedded down in Wright and Rath's. Now there were five. Of those in Hanrahan's, six were still able to fight, including Tony and Doug. The great freight wagons of the Sheidler brothers, left outside the night before, had been overrun from the first instant. The two brothers had left their Sharps rifles in Hanrahan's, and had gone early to bed in the wagons as preferable to the malodors of the store. Their four Mexican bullwhackers chose the other wagon to bunk in. Neither they nor the Sheidlers had a chance to fight. They were killed and scalped in the very beginning.

Now there was a sort of grisly hush everywhere. Many dead Indians lay about, but only a few wounded ones remained. After a time, some of the defenders appeared outside the buildings. Shots came from the edge of the cottonwoods. The whites paid no attention. Indians often had weapons as good as the whites—at Little Big Horn they had better weapons than Custer's cavalry—but they were not sharpshooters. There was not much danger from Indian bullets so far away.

Presently there was a singular movement between the stores and the corral. A figure crawled feebly toward the buildings. He was not an Indian. Two of the whites went swiftly to help him, while buffalo hunters opened fire on the marksmen in the timber. There was, then, a temporary flurry of shots. The two whites brought the crawling man back to Hanrahan's. He was that William Tyler who'd gone outdoors with Billy Ogg before there was any alarm, and who kept on when Billy Ogg started back. He'd been shot through the lungs at the first volley, but in the rush toward the trading posts nobody had bothered to kill and scalp him.

MacGregor's voice came shakily in Tony's headphone.

"Are you—all right? Tony? D-doctor Phillips?"

"I haven't seen Doug," began Tony. Then he stopped. He did. There was blood on his face. Tony started toward him. Then, most quaintly, he realized that the blood was from a cut Doug had gotten from broken glass in Johnstown, when the water was rising fast and the child they'd rescued was not yet safe. The cut had broken open again

during the fight.

"Doug's all right," said Tony. He'd felt some impatience with MacGregor because of her obvious absorption in Doug. But now he knew anxiety about the girl named Elena, whom he'd seen twice the night before and had not yet exchanged a word with.

"I'd like to—be sure—"

Doug cut in.

"I don't know," he said somehow irritably, "whether history reports events or causes them. It was history said the ridge-pole broke, and Tony and I arranged for it to happen. But it wouldn't have happened if it hadn't been history. We'd never have thought of it!" He stopped. "Ann? Kirk? What does our air reconnaissance say about the Indians? Have they had enough?"

"Not likely" said Kirk's voice. *"We've got the flying harness in a high crotch in a cottonwood tree, with the picture tube pointing down. The timber's swarming with warriors. They don't seem to be moving away, but it's too early to tell, yet."*

"I'm going to see about the other stores," said Tony abruptly.

He went toward Leonard and Myers'. He somehow wanted very urgently to be sure that Elena was not among the casualties of the Indian attack. It was not rational behavior, of course. Something had happened to him which very many people experience and very few admit. He'd become obsessed by a completely unreasonable interest in a girl.

He hadn't reached the other store when Bat Masterson came out of it. Tony nodded and would have gone by, but Masterson stopped him.

"Your friend said you knew things in advance. Second sight." He shrugged, and said, "You knew that one! There was an attack, and the devil of a big one, too."

"Yes," admitted Tony. "It was."

A gun went off in the cottonwoods. The sound of the bullet passing the two of them was distinct.

"Do you know anything else that's about to happen?" asked Masterson. He didn't sound convinced, but he was not nearly so skeptical.

"Not now," said Tony. He covered up Doug's excuse for the warning that had turned out to be useless. "Either I know, or I don't. I can't depend on it."

Another gun shot. Another bullet whined by.

"I think we'd better move on," said Masterson without haste. "But if you get any more second-sight feelings, let me know!"

He waved a hand and went on. Tony entered the store. There was a

fire burning where it had burned the night before. The iron pot of stew was set on it, but not yet steaming. He looked for the girl. She stood up from where she'd been bending over a wounded man.

"There'll be coffee and something hot to eat pretty soon," she told him. "I've been doing some bandaging. How are things in the other stores?"

Tony found himself stammering a little. She looked at him steadily, and after an instant he told her of the casualties in the other two buildings.

"I'll go see if I can help," she said.

"The Indians are still shooting!" protested Tony. "Better not."

She smiled at him. But she picked up a parcel of improvised bandages, torn from a bolt of yardgoods for which there was little call in Adobe Walls. She went out the door and across to Hanrahan's. There was a muted shot from somewhere, but apparently not aimed at her. It was probably a shot hopefully aimed at a window, through which it might go and hit someone inside.

Tony stayed where he was. Rather absurdly, he tended the fire and got the buffalo stew to boiling.

That was, as it turned out, the only time he exchanged words with the girl called Elena. He saw her often and on several occasions she furnished cooked food to him and to others when the events of the siege allowed of such matters as eating. But he never had an opportunity to speak to her again. It bothered him, then and afterward.

The situation of Adobe Walls, despite the first defeat of Quanah Parker's followers, was very grave indeed. The Indians could not abandon the attempt to overrun the settlement without being disgraced in their own eyes. Besides, there was the grand strategy they knew to be their one chance to continue their lives as they preferred them. If the Texas herd's horde of buffalo hunters were wiped out, the buffalo that fed the Plains Indians would be preserved and the Indians could remain free. If the buffalo were wiped out, the Indians must either starve or submit sullenly to live on reservations on rations allowed them by a not-over-generous government. And much of those rations would be stolen by that peculiar breed of human beings who became Indian agents. The Indians had reason to fight. But their practices toward prisoners and white women prevented any whites, anywhere, from any sort of sympathy with them.

During the morning Doug joined other whites in gathering up a remarkable collection of weapons from the Indian dead. Most of them were from just outside the windows where the attackers threw away their lives by the persistence of their assault. There was everything in

the Indian armament, from flintlocks to most modern of buffalo rifles. The defenders of Adobe Walls were more lavishly equipped for killing after the first attack than before it. But they'd lost a great part of their fighting force.

There'd been twenty-eight whites in all three buildings the night before. Now there were nineteen left active. Of them, fewer than half were without a scratch. The others had wounds ranging from trivial to grave. Still, those able to move about did so freely, ignoring the sniping fire that never wholly stopped.

Ammunition was precious to Indians, who had either to pay extremely high prices for it, or else depend on the murder of whites to keep up their supply. They couldn't afford to use bullets for target practice on marked targets. The result was poor shooting at any great distance. But it was still true that they had a very, very good chance of wiping out the garrison of Adobe Walls. And the members of the garrison knew it. There was no chance of holding out unless their situation became known to other whites. That could not be imagined. They were in trouble.

Tony, with the bone-conduction receiver under his collar at the back of his neck, felt a faint vibration there. He shifted the receiver to its proper position and said, "Well?" Kirk's voice came urgently.

"They're going to try again, Tony! They're getting mounted. If they were giving up, they'd look dispirited. But they're making their ponies prance and caracol. They're showing off to each other, bragging of what they're going to do. They're massing on the hillside behind the stores, behind the first range of hills. It looks like they're going to try an attack on horseback! Crazy! But there are the devil of a lot of them. I'd say at least a thousand!"

Doug came looking for Tony. His expression was at once savage and pessimistic. He'd heard, of course, what Kirk had just said.

"What now?" he asked sardonically. "Everybody's sure they took enough of a beating to send them off! They say the main body will leave, now. Some few may hang around to snipe and try for a scalp or two, but—"

Tony went in search of Bat Masterson. That already famous man would be listened to. He'd been town marshal of some of the toughest towns in the West. He was an old friend of Wyatt Earp and the fabulous Doc Holliday. He'd gone into Dodge City and displaced the mayor and the city council because he was displeased with the way they ran things. The legends of his doings would live for a long while, but the least credible would be his end. He'd die in his bed as a sports writer on a New York newspaper.

Tony found him having a meditative morning drink from a dipper beside a barrel.

“Last night,” said Tony, “Doug tried to tell you that I’ve second sight, or something on that order. He said I knew there’d be an Indian attack this morning. You didn’t believe him. There was. Just now you asked if I knew anything else on the way.”

Bat Masterson looked at him with considerable curiosity.

“Well?”

“The Indians are massing for another attack,” said Tony. “Not from the cottonwoods this time, but from behind the stores. Down the hillside. They’re going to make it on horseback.”

Masterson stared at him.

“Horseback? That’s foolish!”

“I don’t explain it,” said Tony drily. “I just tell you. It won’t be long. That’s all I know. But I know it.”

He went back to Doug, who clenched and unclenched his hands beside the door of Hanrahan’s. He was in a state of helpless fury.

“It might be a good idea,” said Tony, “for us to start reloading those Indian guns.”

Doug ground his teeth.

“What’s the good of it?” he demanded. “Those fools—”

“Masterson will notice,” said Tony. “And he’ll think. Maybe he’ll think why they’ll try horseback. I can’t!”

He set to work on the extraordinary collection of weapons the Indians, dead or run away, had left for the picking up. A smaller war party might have averaged more modern guns. But Quanah Parker’s fighting force had scraped the bottom of the barrel for weapons for what was to be a supreme effort. Everything that would shoot had been brought out for this raid.

Some of the guns were flintlocks. There was actually one matchlock gun in the assortment, doubtless handed down for generations since its first Spanish owner was killed by a stone-tipped arrow. There were percussion guns, some of them converted from flintlocks to the use of percussion caps. There were some pistols. There were a few Colt revolvers, some of them marked “U.S.A.” Cavalrymen had died to furnish them to Comanche warriors.

Tony began systematically to reload the guns that had been fired. The proper charge for a muzzle-loading weapon was just enough powder to cover the ball held in one’s hand. Powderhorns and bullet pouches furnished the means to make each gun deadly according to its capacity. A gray-haired buffalo hunter joined in the enterprise, reminiscently explaining how each kind of reloading should be done. Doug joined.

Bat Masterson stopped where the work was in progress. He said

abruptly to Tony, “You said you didn’t know why they’d try a mounted attack. Maybe you don’t. But I do! Now! It’s just crazy enough for them to think of! And they will try it!”

He went away. Doug blinked after him. When the loading was finished he drew Tony aside.

“What’d you tell Masterson?” he demanded.

Tony told him. Doug spread out his hands.

“Why will they try a mounted attack? It is crazy!”

“Maybe not to an Indian. It isn’t to Masterson. Senator Clark read me something that said Masterson’s leadership was largely responsible for the success of the defense here—if it looks successful! So I gave him what Kirk told me. Apparently he’s going to use it, as a leader. Maybe that’s the way it works.”

“The way what works?”

“Leadership,” said Tony. “Or maybe time travel. Look, Doug! I went back in time because Senator Clark was going to kill Project Tic-Toc. You came after me. Because we were in Johnstown little Julie Bowen wasn’t drowned and the Senator was born to intend to kill Project Tic-Toc and send me back in time so little Julie wouldn’t drown. Isn’t that clear?”

“No!” said Doug angrily. “I’m mixed up in it but I don’t see!”

“Neither do I,” admitted Tony. “So I’m going to one of the other stores and see how things go.”

He went to Leonard and Myers’. Two guns shot at him on the way between the two buildings. One bullet struck the ground not far from his feet. The other—he didn’t know where it went.

Elena was bandaging a wounded man. Tony watched. He knew it would do no good. She belonged here. He belonged somewhere else. There were other considerations. Presently he returned to Hanrahan’s.

It was about noon of a very beautiful day with much sunshine and much blue sky. He was fired at again. He found an orderly bustle in progress. Bat Masterson was organizing for another attack, to come down the long hillside behind the store buildings. It would be a mounted attack. He explained why—and what would have to be done about it. Tony felt some admiration for Masterson, who could take a cryptic message and extract sound sense from it.

Men fixed cold food and ate it, Tony among them. His feeling of restlessness increased. It became unbearable to wait for something like this to happen. He might have felt better if he’d shifted to the store where he could feel that he was fighting for Elena. But Hanrahan’s was least well supplied with fighters. It was better that he stay.

At a little past noon there was a remarkable sound outside. It was a

bugle. Its notes were silvery and came very clearly through the motionless midday air. Men stopped all other actions to listen, but nobody gave any sign of thinking it what it seemed to be—white cavalry come to attack the Indians. That did not occur to anybody. The sweetly piercing tones of the bugle came again. The greatest Indian war party up to that time took their order to attack from a cavalry bugle, blown by a bugler, sending the authentic cavalry bugle call for "Charge!"*

*(This also is history. The bugler was a Negro deserter from an Army cavalry unit. —M.L.)

Over the rolling ground, on the opposite side from the stream, tiny specks appeared above a hillcrest. Then above another. Then mounted Indians came into view, with lances waving and feathered headdresses vivid in the noonday sun. They swept over the hills and came down the hillsides toward the three squat log buildings. The ponies' hoofs made a drumming sound upon the earth. They formed an array of savage splendor.

At first they were out of gunshot range, though a Sharps was sighted to seven hundred yards. But they came on. Nothing exactly like it had ever been seen before, and would only rarely ever be seen again. Well over a thousand horsemen swept down upon Adobe Walls in battle array. Feathers fluttered. Pennons of painted hide waved at the ends of lances. Ponies of every conceivable coloring—brown and black and piebald, and pinto and roan and russet and all the tints between—flowed onward in a deliberate display of strength that should have convinced the whites of their imminent doom. The bugle's high clear music rang out again in the bright sunshine, and the rippling mass of warriors moved more swiftly. Then individuals raced ahead, and thin trails of smoke spread out behind them, and grew dense, while the monstrous mass of horseflesh surged toward the buildings in full charge.

13

SCATTERED SHOTS cracked from the log structures, but their targets became blurred and difficult to see. At five-yard intervals, riders sped on before the mass. They dragged burning masses of wet straw at the ends of rawhide ropes. The straw smoked profusely. The separate smokes joined. Over a thousand Comanche, Arapahoe, Cheyenne and Kiowa warriors raced for the buildings of Adobe Walls behind a smokescreen that hid all but the riders who made it. The smokescreen was an Indian device more than a half-century before white men thought to use it in war.

The booming of guns increased in frequency. The buffalo hunters had really deadly weapons in their Sharps rifles. They fired from the doors and windows of the three stores. Most of them had taken time out to bite off huge chews of eating tobacco. They sighted on the smoke bearers with painstaking care, chewing abstractedly the while. Their guns boomed.

A section of the smokescreen collapsed here and there. The riders who sustained such portions had been hit, or else their ponies. The defenders flung lead into the exposed portion of the charge, using the previously retrieved Indian weapons lavishly and saving their own guns for the final close-quarter work.

They needed them. The charge came on. Here and there an Indian pony fell. Here and there a painted, befeathered warrior threw up his arms or went slack and slid to the ground from his mount, left scared and bewildered among its ridden fellows. But the Indians were magnificent in their disregard for losses under the eyes of their companions. From a distant drumming, the sound of pony hoofs became a rumble and then a growl, and then a thunderous noise which even the sound of shots did not drown out.

As a picture, the charge was incomparably fine. Tony saw the twinkling of innumerable hoofs, creating a dust cloud as they went onward into the smoke, with the animals' bodies and their riders partly hidden by the dust and smoke combined. In places there were no dragged straw cressets, and there red-skinned fighting men charged with waving lances. Now and again puffs of powder smoke flashed into existence before them. And they yelled.

They made a high, quavering ululation, unspeakably menacing. In the rolling fog of dust and smoke it seemed that the Indians were irresistible; that the assembly of horseflesh and mounted men would

bury the buildings under their sheer mass.

Then the foremost ponies hit. Hurtling men and animals struck the buildings like a tidal wave. The log houses shook from the impact, and dust fell from the sod roofs overhead. Insanely valiant warriors flung their horses at the barred doors, trying to break them in with horseflesh since human flesh earlier had not been enough. The spaces between the buildings filled up with horses and horsemen. They swarmed. They were utterly reckless and utterly deadly.

Then the new trick of the Indians came into use. On foot, at sunrise, in pure desperation they'd tried to tear down log walls with their hands. At least one log in the Wright and Rath building had been loosened by human strength alone, but it caught on something and did not come clear. But now Indians flung themselves from frantic frightened ponies and looped rawhide ropes to the corner logs of the four-square buildings. Two—three—half a dozen rearing animals were to fling forward together. They should have pulled the corner logs free. They should, quite literally, have huffed and puffed the buildings down.

But the defenders were prepared for exactly this. Everywhere else, from every window or door opening, guns poured lead into human targets. But at the corners of the buildings they killed horses only. Before half a dozen scared ponies could leap ahead in unison to snatch logs from their dependence on each other, Sharps rifles knocked down two or three or four of them. Ponies screamed and toppled, kicking. Single ones sometimes heaved magnificently. Unified effort was impossible. Lashed ponies tried to climb the bodies of dead or wounded others, not understanding the purpose of their owners. And those owners, in a chaos of kicking horseflesh, tried to set loops around the logs. And it was not possible. Actual heaps of dead and dying ponies built up at the building corners. They kicked and screamed and toppled upon one another. And there were Indians in the thickest of it.

It was a massacre, of ponies and their riders and other riders who tried to cover them by their attack. Presently there were gaps in the swarming figures about the building walls. A little later, only individual knots of madly fighting men on horseback clustered about the windows and the doors. Later still, only dead or wounded horses and only crawling wounded men—and dead ones—remained about and between the buildings of Adobe Walls. If valor and recklessness and numbers had been decisive, the settlement must have been destroyed. But it was simply impossible for mounted men to overwhelm the trading posts. Almost abruptly, the last of the attacking Indians galloped away.

And again there was astonishing silence.

Counting Tony and Doug, there had been twenty-eight white men in the settlement when the first attack was made. There were the Sheidlers, besides—the two brothers and four Mexicans—but they were killed immediately. At the end of the second, mounted, attack, eighteen white men remained able to stand up. Most of these, even, were more or less severely wounded.

And the fighting was not over. During all the hot midafternoon hours guns popped naggingly from all about the settlement. During the later afternoon, the firing continued. Just after sundown a spectacular shower of fire-arrows shone against the darkening sky. Some fell on the roofs, and Indian marksmen had crawled close under cover of the grisly objects all around. They planned to shoot from nearby when the whites appeared to fight the flames.

But the roofs were sod. They did not catch. At worst they smouldered and could be extinguished from within.

After darkness was complete, though, a more successful contest for glory began. The night was moonless. Starlight was no help to the defenders' accuracy. A body lying on the ground was very much like any other body. If not detected in the act of moving, an Indian could impersonate a corpse while crawling to the very building wall. Then he could leap up and in one motion thrust the muzzle of a gun into a window opening and fire it at random inside. It might kill somebody.

It did. Another man died in Wright and Rath's from a bullet gotten in a window in just this fashion.

For a state of things like this there was no answer. It went on for days—different tactics in the daytime from those used at night, but there was no end to the ingenuity or the daring of Indians out to kill whites. The situation of the whites was such that they must hold on until they were killed. But there was an Indian situation too. Adobe Walls couldn't be left behind undestroyed. Whites couldn't be left behind alive. The design for saving the Texas buffalo herd and the continuance of their way of life depended on the destruction of Adobe Walls with no survivors. Therefore Quanah Parker had to open his mind to any conceivable solution to his problem.

During the afternoon of the fourth day of the siege, Tony saw mounted Indians on a distant hillside. They looked vaguely unfamiliar, though he knew Indian costume only from having shot at them and seeing them on dead men. He raised the question of what these mounted men were about.

"Professional interest," said Bat Masterson after a careful look. "They're Pawnees and Osages. They're not with the war party, but they heard about the fight and came to look things over. If we'd been

wiped out, they might have advised their tribes to join in and gather some white scalps while the picking was good. But they see how many men Quanah Parker's lost."

The group of mounted men did not ride away. They waited, as if to see some interesting action. Bat Masterson looked at them repeatedly. Bullets could have been dropped among them, but there were Pawnees and Osages among them, neutrals. It was better simply to keep an eye on them.

When a single rider came over a hillcrest, he went almost unnoticed. The rider was a young brave, stripped to the waist and with no more than three or four feathers in his headband. He flogged his pony mercilessly to get every ounce of speed out of it. He was not visibly armed.

It was not reasonable. It couldn't be an Indian deserter trying to join the whites. The party of chiefs, waiting to see something, ruled that out. The pony and rider came on. The hide hunters in the buildings were only mildly curious, no more, but the solitary brave began to zigzag as if to avoid the bullets he might have expected. That was preposterous, too. The pony came on, continually lashed for more and more speed. It was three hundred yards away. Two. One. It aimed to pass between Hanrahan's and Leonard and Myers' trading posts. The affair looked like the meaningless bravado a young man crazy for distinction might attempt,—to run the gantlet of white-man fire to show his scorn of danger.

He was close, now. Tony saw the pony's eyes rolling wildly, urged as it was to impossible speed. It reached the buildings. It plunged between them. Still no shots by the whites. But suddenly the young Indian straightened up. He flung something at the side wall of Hanrahan's. Tony had an instant's glimpse of a rawhide-wrapped ball in midair—and a highly improbable suspicion of a trail of smoke.

The racing rider yelled in triumph. He bent low and urged his pony even faster toward the cottonwoods. Somebody shot at him. It was a miss. Somebody growled. Then—

There was an explosion. Smoke billowed out furiously from the side wall of Hanrahan's. Dried mud fell from the chunkings of the logs. Somebody—a deserter or renegade or what have you—had contrived a homemade, rawhide-wrapped gunpowder bomb to blast down a wall of Hanrahan's. It wasn't powerful enough. The rawhide wrapping didn't confine the powder strongly enough to develop its full destructive power. The bomb made a small crater in the ground. It made an impressive cloud of smoke. That was all. With important events impending, no less than the success or failure of Quanah Parker's grand design, it was distinctly an anticlimax.*

*(This, like the visiting Osage and Pawnee warriors come to observe the siege of Adobe Walls without taking part in it, is part of the authentic history of this battle. —M.L.)

Before sundown the visitors to the battlefield rode homeward. Some Kiowas broke away from the main body and went off on a raiding party of their own. Guns continued to fire at the log houses where Leonard and Myers, and Hanrahan, and Wright and Rath bought buffalo hides and sold necessities to hide hunters. There was a man wounded on the fifth day of the siege, and two more on the sixth. It was on this sixth day, incidentally, that an Osage in Dodge City told a white man he trusted about the siege of Adobe Walls.

And on this same day Kirk reported the completion of the assembly of the two-man time-travelling device which was to be tested, checked, rechecked and retested, and then sent to bring Tony and Doug back to the Time Tunnel and the normal existence of modern civilized man in secrecy underground. Doug listened while Kirk made the statement. He said skeptically, "We've had things perfectly worked out before and they acted as we didn't expect. What does Ann think about it?"

There was a perceptible pause. Then Kirk said uncomfortably, *"She's out of it. She cracked up. Hysterics. She couldn't sleep and she wouldn't leave the Tunnel chamber for more than five minutes at a time. She listened to the shooting and the fighting your microphones reported, and she collapsed. The doctor says she'll be all right, but there's a limit to what a human being can stand."*

"You should have told us!" said Doug angrily. "This is a hell of a thing to do! You should have made her get some rest! I count on Ann! Tell her I want her to get well at once!"

It was Tony who asked the practical question.

"If she's sick, who's to handle the traveller?"

The answer was Sam Creighton, who'd brought Senator Clark from the desert when a helicopter landed him there with Tony. He'd been practicing with the rabbit harness which had operated as air reconnaissance for Adobe Walls. He would be competent enough, no doubt. But MacGregor had a touch, a feel, a gift for the handling of time-travel devices. Nobody else had it to the same degree. Doug fumed. He wanted MacGregor at the controls when the next time shift was made. He trusted her knack, her experience.

He was so much disturbed that Kirk wasn't able to give him all the details about the equipment of the new device. But it didn't particularly matter. When it was tested in the Time Tunnel, Tony and Doug were listening by their bone-conduction headphones. They heard the preliminary sounds in the Tunnel chamber. They heard the crashing sound as power plunged into the heavy busbars, making

force fields of incredible strength, capable of acting over incredible distances. Sam Creighton sat at the control desk, handling the controls. The time traveller should have vanished instantly from the Tunnel, as the rabbit harness had done, as Doug had done, and as Tony had done before him. But it didn't happen that way.

Nothing happened. The time traveller didn't vanish. It didn't stir. It didn't do anything at all. It just sat there.

14

THE NEWS of the siege of Adobe Walls went like lightning through Dodge City. It instantly reached Fort Dodge. Prominent citizens waited immediately upon the commanding officer of that military post to ask how soon a relief force could be sent out to rescue the defenders of the hide-buying establishments under attack. Mayor Dog Kelley of Dodge City was impressive. This was one of the occasions when the military in their midst were appreciated by all good citizens. How soon would the soldiers leave? Would they need anything that citizens could supply? Luke Short, who ran the Long Branch Saloon, was less impressive but even more practical. Did the commanding officer have to ask for authority to march? If so, citizens backing his request for authority might stir up things for a quicker decision. The commanding officer said that telegrams had been dispatched. He'd send more. With more details.

He did.

And the matter was evaluated. It was a case of a very large war party estimated at more than a thousand warriors that had attacked trading posts where there were probably only fifteen to twenty whites. It was clear—so the decision ran—that so small a number of men, especially civilians, couldn't hope to defend themselves against so large a number of hostile Indians. If they had been under attack for as long as stated, by the time troops could reach the spot the defenders would unquestionably all be murdered. Therefore the situation could best be handled by a punitive expedition for which troops could be gathered at a later date. In short, it was too late to do anything.

But this did not please the citizens of Dodge City. They boasted that it was the wickedest little city in the world, but there were limits. Those limits were profanely stated by Shanghai Pierce, a notable cattleman of whom it was said that he could be heard a quarter of a mile when he whispered. Mayor Dog Kelley of Dodge City spoke officially for the citizens. Luke Short, spoke for his friends. Informal invitations went out for an Indian-killing party, and a relief expedition of civilians set out for Adobe Walls. It was composed of cowhands without cows and bullwhackers without oxen, plus gamblers and chuckwagon cooks and mule skinners and hide hunters and some people of even less reputable occupations. But the relief party was very nearly a cross-section of Dodge City except that no dancehall girls went along. They'd have been willing, but they weren't allowed.

At Adobe Walls the steadily dwindling group of men, thoroughly tired of fighting, nevertheless continued to fight. The sniping, shot-in-the-back style of warfare the Indians were now practicising was definitely not congenial to the whites in the stores. They preferred a stand-up-and-knock-down type of combat. But the Indians had come as close to that at the beginning as their psychology would allow. It hadn't worked. Now the whites devised countermeasures against what they called Indian tricks and the Indians considered some of those measures less than proper behavior either for or against warriors. Those who fought on each side vehemently disapproved the behavior of those on the other.

After a certain interval there were only fourteen white men on their feet. It was no longer wise to move freely from one building to another. Instead of one or two shots at a white man venturing on such a journey, now there was almost a storm of fire. The practice of exchanging visits between stores stopped. The whites in Adobe Walls were very, very weary. They were weary to death of killing. They might have considered surrendering but for the known habits of their besiegers with any prisoners they might take. It was better to kill a few more Indians.

At the Tunnel, Kirk and Sam Creighton labored desperately to find out what was wrong, that a time traveller of the most approved kind, each of whose circuits and component parts was absolutely what it should be—didn't work. Didn't try to work. Did nothing.

At Adobe Walls again, Doug came despairingly to Tony. Tony was fully and gloomily aware that there was no point in thinking about the girl Elena. She'd be killed somewhere about the same time he was, he considered. Doug might, and would be sensible if he did, consent to make one more time shift with the harness he now wore as a communicator only. Nothing worse than being killed was apt to happen to him. The rabbit harness drone might follow him to wherever he was transported and there work out the needed answers for his return to Project Tic-Toc. He'd risk a time shift himself if it weren't that every gun was needed for the defense—among other things—of the girl Elena. But he was tired, tired, tired.

Then Doug came to him.

"The new traveller doesn't work," he said uneasily. "They've tried it a dozen times. They put it in the Tunnel. They check everything. They turn on the power. And nothing happens!"

"What should happen?" asked Tony drearily. He'd hardly listened.

"I'm talking about the time traveller Kirk's assembled," said Doug urgently. "In the Tunnel chamber!" He said apprehensively, "We may be stuck here for always! Tony! The whole Project may turn out a

failure!"

Tony roused.

"It's probably something simple that's wrong," he said tiredly.

"I want to get back!" said Doug in a tone of protest. "They haven't let Ann get back on the control-desk job. She's in better shape but she's had a bad time! Her nerves are shreds!"

Tony looked about him. The eight-inch log with which the broken ridge-pole had been shored up was still upright in the center of the dirt-floor, log-built, unfragrant store building. There were three men on blankets, stoically waiting to find out whether they would live or die. Someone was boiling coffee. Somebody was examining his buffalo gun with scowling disapproval. It was the custom to swab out a Sharps with a wet rag after every ten or fifteen shots, to keep it from heating up and its rifling grooves from losing precision. During the past few days that had been impractical. This man was doubtful of his weapon. It might cost him hundreds of hides during a hunting season.

"Every component checks out," insisted Doug. "I can't see back there as they can see here by picture tube. But I've gone over everything with Kirk! There's something basically wrong. If it were something connected with the controls we'd have to get Ann back on the job. But we shouldn't if we can help it. She's a nervous wreck. I'm worried about her, Tony!"

Tony looked at him. He felt a certain mirthless amusement. Everybody but Doug would understand why MacGregor had collapsed. It was because Doug was a castaway in time and she hadn't been able to get him back. She might feel mild solicitude for Tony, but it was Doug she thought of as besieged by a horde of justifiedly murderous Indians. That was what caused her state of nerves.

"There must have been something in the way things were done." Then a certain wry idea came. "What does Clark think?"

"He wants to call in outside help!" said Doug aggrievedly. "The Academy of Sciences! The space services consultants. They know nothing about time travel. If they did they wouldn't believe it!"

"I've got an idea," said Tony suddenly. "Is the trouble that the traveller seems to operate but won't travel in time?"

"Yes. Of course! What else?"

"Hm … That might be the trouble," said Tony. "Ann said she'd found the coordinate that went straight from the future to the past, like a line going from the north to the south. But a time traveller can't go along a line that goes directly from the future or the present to the past. A time traveller can't travel only in time! Obviously!"

Doug said sourly, "Our harnesses did, with us in them."

“But we didn’t travel only in time! We travelled a couple of thousand miles as well as most of a century. Don’t you see? Take this gun! Could you move it five seconds back in time without moving it sidewise in any fashion? Remember, this calls for it to move only in time!”

Doug’s mouth opened for argument. Then he said painfully, “Kirk! Are you listening?”

“I’m kicking myself,” said Kirk grimly. *“Go on, Tony!”*

“Five seconds ago,” said Tony, “that gun was in the same place. Ditto one second and a thousandth of one second ago. You can’t send it from now into a past it’s already occupying! Two things can’t be in the same place at the same time. Likewise one thing can’t be in two places at the same time. So when you move an object from one place to another it has to move in time—a later time where it arrives. To move an object in time means you have to move it from one place to another. I guess that Kirk was trying to make the traveller go straight back in time—to make it move in time without moving in space. Which can’t be done. So he should try it—”

“Don’t rub it in, Tony!” protested Kirk. *“I see it now! We’ll set the controls to move it north, south, east, or west as well as backwards in time —and something should happen.”*

“It should,” agreed Tony.

It did.

He heard in his harness receiver when a crashing impact sounded in the Tunnel chamber. It was all the power in Project Tic-Toc rushing into the complex metal webwork of the Tunnel. And then he heard shoutings. Presently Kirk calmed down enough to babble that the new traveller had vanished like a wraith when the power went on, and it’s multiple picture tubes were giving sharp images of where it was. Where ever that might be it was winter and late afternoon and there was deep snow upon the ground. There was a highway in sight. The place and even the continent wasn’t certain yet, but the traveller worked, under the control of the Tunnel. They’d have it make a time shift or two and then come back to the Tunnel, and then repeat that maneuver until there could be no doubt whatever about the safety and even convenience of time transportation. And then they’d bring Tony and Doug back to the Tunnel chamber.

He wasn’t at ease. He was in Hanrahan’s, and Elena was in Leonard and Myers’, and he hadn’t seen her for two days. And it was wise for him not to see her because— Because it was impossible for anything to happen as a result of his obsession by thoughts of her.

At a time closely corresponding with the time in the Tunnel chamber, the strictly civilian Indian-killing expedition left Dodge City.

There was no discipline and only the loosest of organization, but from the moment the march got under way there were some men acting without orders as advance guards, and some as flankers, and there was even a rearguard. The commissariat had furnished food and refreshment in almost equal quantity and the highly irregular expedition moved briskly toward a fight with several times its own number of hostiles.

On the first day of their march they made thirty miles. On the second day fifty. On the third day sixty.

Coincidentally, when they were thirty miles from Dodge, the new time traveller reappeared in the Time Tunnel. Even Senator Clark rejoiced openly, though his reasons were plainly his own. He sternly did not reveal them. The traveller went out again, with its controls set for new figures. It reported lush vegetation and hairy creatures like elephants. It also found an abandoned village and Indian corn growing. The combination meant North America and probably fifteen thousand years ago.

When the rescue party was ninety miles from Dodge, the time coordinate control had been adjusted to a more reasonable figure to pastward. There were buffalo. There were Indians. But no horses. Again North America. Before 1600.

Later in the same day a tired-out Indian on a sweating pony arrived at the hostile encampment about Adobe Walls. He reported that the civilian relief expedition was on its way.

The information meant that the grand design for saving the Texas herd from hide hunters had failed. The plan was known or guessed. In any case the element of surprise was gone, and with it all hope of triumph. So Quanah Parker bitterly acknowledged the total failure of the enterprise and told his followers to go home. Some of them did.

On the next day a highly peaceful party of Pawnees rode into Adobe Walls. They mentioned the coming of the rescue expedition from Dodge City. They were treated with great politeness.

And Tony and Doug waited outside Hanrahan's that night. They were armed, of course. But they waited for a small object very much like a pillow with straps around it. Eventually it came drifting out of the night, some twenty or thirty feet above ground.

MacGregor's voice came out of the headphones. It was slightly tremulous, but it was MacGregor.

"I'm back on the job," said her voice shakily, *"and we have the other traveller hidden back of the corral. The General and I have searched through all the wood, and there aren't any Indians. You can follow the little one straight to the new traveller. Then we'll bring you home."*

Her voice broke a little. Doug said gruffly, "Good to hear your

voice, Ann. I've missed it."

He and Tony moved away from the buildings. They said no farewells. Actually, their departure would be admirably covered up by the arrival of an advance party from Dodge shortly after daybreak. Festivities would follow, and when the main body arrived the celebration should be extensive. It would continue at a high level until people began to remember that they had businesses back in Dodge City and started off in parties of various sizes to go there. Anybody who thought of Doug or Tony would assume they'd gone off with some other group. There'd be no particular concern. But it would be, and remain, a tradition that twenty-eight white men stood off a war party of thirteen hundred Indians, and fought them until only eleven were on their feet. But they'd killed more enemies in a given time than any similar group of men in the history of the West.

But long before that Tony and Doug reached the corral, with the improbable small object leading the way. And Doug was now pessimistic because things seemed to be going too well. They came to the traveller—a small railed platform with various bumps, bulges, and separate bits of equipment firmly fixed in place.

It was necessary for them to weigh themselves and to jettison an amount of provided ballast to make the traveller have exactly the right amount of mass on board. Then carefully metered amounts of power would make the traveller move predictably in predictable directions, including the direction of time yet to come. But Doug remained pessimistic.

"Somehow," he said sourly, "I have a hunch that there's going to be a foulup somewhere."

Tony said nothing. They followed the anxious instructions of MacGregor. Later, Tony remembered moving a Sharps buffalo gun they'd brought from the stores just in case. He shifted it out of the way in the darkness.

"All set?" asked Kirk's tense voice.

"All set," said Tony.

A pause. There was a small sound like someone's teeth chattering. That would be MacGregor. Kirk said, *"Watch out, Senator! Ready now; Ann! One, two, three—"*

The sensation of travelling in time was excessively unpleasant. Tony felt that he was being pulled apart. That he was coming apart. That his head was about to explode. That it did.

The sensation stopped.

Darkness remained. They weren't in the electric-lighted Tunnel chamber of Project Tic-Toc. That was a thousand feet underground.

Wherever they were, it was above ground. Lightning flashed, horribly bright and near. Thunder followed it.

It was not ordinary thunder. It rolled and rolled and reverberated, seeming not to die away at all but to be echoed and reechoed interminably, as if this were a completely impossible cavern which had the properties of a whispering gallery. Lightning flashed again and again. The thunder continued in this totally new fashion. It was almost impossible to speak above it. Doug tried. He caught Tony's arm and shouted in his ear.

"I *knew* something would happen, and dammit, it has!"

Since there was nowhere on earth that thunder sounded like this, it appeared very likely that his surmise was correct.

15

LIGHTNING FLASHES revealed a surprisingly normal state of things under the abnormal tumult in the sky. There were quite ordinary trees, illuminated by lightning as if by flashbulbs. They were starkly shadowed, but familiar. The air had a faint, faint smell of ozone as if continuously exposed to electric discharges. Tony bent over the pipe-rail around the traveller's platform. When lightning came again he saw grass.

He touched Doug on the shoulder and shouted in his ear.

"We're on earth, anyhow! There's grass! And there must be sunshine and daylight or it wouldn't grow. There'll have to be sunrise presently."

Doug displayed the irritability he seemed always to feel when in a tight spot. He shouted back, "No stars!"

Tony bellowed in reply, "Thunderstorm! Clouds!"

Doug snapped, "A hell of a thunderstorm! Where's the rain?"

"I don't know!" roared Tony. "Let's wait for daybreak."

There was nothing else to do. Tony had never seen this time traveller by any reasonable amount of light. He crouched down, feeling for a place to sit. He found an object which plainly didn't belong here. It was a Sharps rifle. It was very nearly twenty pounds of steel and wood, and the great care taken to keep the mass of the traveller and its load unchanged had been wasted because of it. He growled to himself that Doug shouldn't have brought it out to the corral. But he'd bumped into it and had put it aside instead of discarding it. He was as much at fault as Doug. He put both hands over his ears, to shut out the thunder, and said, "Ann! Kirk! Ann! Kirk!"

The bone-conduction receiver behind his ear brought a voice back to him. It was MacGregor, practically hysterical. He explained about the continuous rumbling of thunder—inadequately. He told her about the Sharps which had changed the traveller's mass and hence the direction in which it travelled.

"We seem to be all right," he finished. "There has to be daybreak here eventually. Things grow here! You can get a new fix on us in the morning, if you haven't got a good one now. Anyhow when daylight comes we'll see if there's more extra cargo aboard and toss it overboard. Then you can haul us back according to plan. For now, I

think that'll do."

MacGregor quavered, *"But that noise—you're sure it isn't animals?"*

He explained again. Something made the thunder echo and reecho, as if it were enclosed within walls. They'd find out what it was later.

"I—was working the control desk," said MacGregor unhappily. *"I thought I'd dropped you into—I didn't know what! And D-Doctor Phillips — But it was just the gun that spoiled things."*

Tony felt Doug's hand on his coat sleeve.

"Tony," said Doug, close to his ear while the thunder rolled unendingly, "Turn off your communicator for a while, will you? I want to talk to Ann."

Tony obeyed. He found as comfortable a place as possible and waited for what seemed years before the gray light of dawn appeared. During most of that agelong wait the noise of thunder continued. But it had nearly died away by time light appeared in what must be the east. When it was light enough to see Doug's expression, his whole manner had changed. He looked exuberant.

"Tony," said Doug cheerfully, "you can turn on your communicator again. The private conversation's over."

Tony had an ironic picture of MacGregor at the control desk, talking to Doug by microphone, with Doug's return communications bellowed out by loudspeakers on the Tunnel chamber's wall. It had its humorous aspect. But he waved his hand off to the right.

"Turn your eyes in that direction," he said drily.

Doug swung and saw what was becoming momentarily more visible in the dawnlight.

It was a city. But it was not a city of the Time Tunnel's beginning time. It was different as a city of—say—1950 was different from one of 1900. Its buildings soared unbelievably skyward. There were suspended highways between them, swooping in perfect catenary curves through breathtaking leaps. It was a city an architect of Tony's time might have dreamed and sketched for pleasure. It was very, very beautiful.

Doug stared at it, speechless. It was miles away.

"We felt very civilized and superior," said Tony wrily, "back in Johnstown and in Adobe Walls. How do you think we'd feel if we walked into that city, Doug?"

"This is—I think this is the future— Where are we, Tony?"

MacGregor said promptly—and her voice was different, *"General Kirk's extrapolating from the fix we have on you and D-Doug."* She lingered over the name. Until now she'd always spoken of him as Doctor Phillips. *"What we've got says you are two or three miles from St.*

Louis. We can't tell what year. We haven't the data for it."

They stared at the city. There was no motion anywhere about it. No planes overhead. No insects. No birdcalls. Literally no sound at all. And there was no motion of any kind in the city.

Dawn became complete and turned into daybreak and that into early morning. Tony and Doug continued to stare at the city. They felt queer. They didn't want to meet the people who might build a city like that. They'd feel too ignorant, too primitive. They'd feel like savages. They might be regarded as something of the sort.

"If time travel is possible," said Tony after a long while, "the people who could build a city like that ought to have come back to our time, Doug. And it is possible! Why haven't they?"

Doug was looking in a new direction, now. He pointed.

There was a highway a quarter-mile distant. It came out of trees and went on out of sight. There were no roads in Tony's time in any way like it. Except in one matter. There was a wrecked car smashed against a tree. There was a dead man in the car. Nobody had tried to get him out or do anything for him. Either the traffic had ceased when he crashed, or later passersby had been in a very, very great hurry. Probably the latter.

"I don't think we should leave the traveller," said Tony slowly. "Things look peculiar. Ann, do you think you could run the traveller like you did the rabbit harness at Adobe Walls?"

MacGregor said carefully, *"I think so. But you'd better get rid of that gun. I've got the controls adjusted just so."*

"It's gone," said Tony. It was. It didn't seem that a buffalo gun would be of much use in a city of the year two thousand some hundred and something.

There was a pause. Then the traveller lifted—a foot or two at first, but then yards. It moved indecisively as MacGregor got the feel of the controls again. Then it sped toward the city.

"If we're sighted," said Tony, with less than perfect confidence, "we'd better vanish before the people who see us believe their eyes!"

"I'll see to that!" said MacGregor.

Doug looked blissful. He actually appeared to be abstracted as the ground flowed past below. They came to houses and saw no signs of life. They saw no living creature nor any motion anywhere. MacGregor said doubtfully, seeing what they saw by the traveller's picture tubes, *"I feel uneasy, Doug."*

"We're here," said Tony. "We'd better look while we are here. Suppose you go higher? We can vanish from midair as well as anywhere else."

"Yes. I can bring you back now!" said MacGregor.

The traveller lifted. It was a platform four feet by six, with a pipe railing and innumerable objects fastened in undoubtedly proper places. It looked crude. Rising to float above this incredible city it looked as much out of place as a dugout canoe at a skimmer-yacht regatta.

They looked down. The traveller threaded its way between towers, under the beautiful suspended highways. They saw streets. Empty. They saw gardens on rooftops. Empty of anything that moved. It was now well into the morning. It was not imaginable that there would be nobody moving about in a city like this.

There was an open square, with trees, raised high above the level of the ground. Many highways ran to and into it.

"Put us down there, Ann," said Tony suddenly. "This place is deserted. I want to know why."

MacGregor said in sudden doubt, *"Plague?"*

"No," said Tony. "There's no destruction. The people left, but they didn't loot or burn. Everything's perfect. A mob exodus would leave looters behind, and they'd destroy."

Slowly, even hesitantly, the time traveller descended. It landed at last in what was apparently the central square of the city. The highways suddenly were not there, and it took examination to see that they ran to the square and then under it, so the square itself was reserved for pedestrians. The towers, here, almost shut out the sky. There were no vehicles, not even parked, anywhere to be seen. No pedestrians on the square, itself. Great, graceful doorways seemed to invite passersby to enter. But there were no passersby. One great door had carved letters above it. They said LIBRY.

"I'm going in there," said Tony in sudden grimness.

"Both of us," corrected Doug. He stared about him. "Ann, can you float the traveller so we can tow it and not leave it behind? Here's a city that was lived in until—at most days ago. The people left it but it hasn't quite died yet. After all, it'll be our descendants who build this city and live—lived in it. I want to find out what happened to them. If you want to know, I'm a—a little bit frightened."

But he got out of the traveller, now resting on the pavement of the square. MacGregor, back at Project Tic-Toc, made absorbed murmurous noises to herself as she adusted the controls she'd previously wanted to leave unchanged.

They went into it, towing the traveller, which wobbled a little, six inches or so above the pavement. Inside the door they came immediately to a vast high-ceilinged hall. There were no books, but

there were hundreds of comfortable chairs, before each of which stood a screen and a keyboard. All the screens were blank. There were carefully composed instructions.

"Microfilm viewers," said Tony. "There'll be reels instead of stacks of books somewhere. What one wants will probably be projected instead of delivered. The index system …" He read an instruction card. "Let's try for news. This might be the equivalent of a reading room of a library of our time, and there should be something in the nature of newspapers."

Somehow he had no doubt that all was in working order. He pressed a button. The screen lighted. The word "News" appeared, and rose up and off the screen. "Late news" followed. Then other categories, from "Auto News" to "Science News" and "Sports." He pushed a button marked "Cancel" and the screen went dark. He pushed again for news and when the "Late News" legend showed, he pushed the button marked "Choice."

Instantly there were pictures of crowds of humans, dressed in an unfamiliar style. They were crowding into something which apparently took them away. A voice said, "The evacuation of St. Louis began this morning, the major wave of evacuees having passed earlier. The aliens have made no response to efforts to communicate with them, but the pressure wall continues to expand. It is now certain that the pressure wall is a dome-shaped field of force, generated somewhere from inside it. The area from which all animal life is forced is still expanding at the rate of approximately two miles an hour. The city is expected to be emptied in twelve hours, the population carried west in commandeered ground cars and all mass carriers available."

There was a clicking and the picture changed, just as Tony said, "That wrecked car." A truck-and-trailer combination showed on the screen. It carried apparatus Tony could not identify, which reached out behind it while men worked at readings and the like. The truck and trailer moved slowly but steadily. The voice said, "Scientists working on the pressure wall have been handicapped by its continued movement. Equipment mounted on trucks has been improvised and exhaustive tests of the nature of the force field are under way. Results are not yet certain."

Another clicking. Another picture, in color and without grain.

"The effect of the alien weapon or instrument or whatever it is, is a pressure, a repulsion, which is somehow physical. An animal overtaken by the pressure wall is irresistibly urged away from the wall, which appears to be generated where the aliens landed. The power involved must be hundreds of thousands of horsepower. An

animal unable to keep ahead of the wall's motion seems to be suffocated as it passes over. Birds, wild things, and even insects flee. Ants are as subject to it as horses and human beings. It is believed—it has been proven—that the pressure wall does not operate over deep water. Persons on deep-water lakes may be safe on islands. Ships at sea are definitely not affected unless they move into shallow water."

Yet another clicking. Yet another picture.

"Evacuation of all cities and habitations in the way of the pressure wall is successfully proceeding. It is hoped that the pressure wall will be self-limited in size. It is hoped that our scientists will solve its nature and devise ways of combatting it. For data on the aliens see 'Science.' "

Tony pressed the "Cancel" button. He waited, and at the appropriate moment pressed "Choice" when "Science" was displayed on the screen. A man at a desk spoke out of the screen, "I am afraid that as yet science has little to say. An object with an anomalous velocity was detected coming in past Saturn by the observation satellite there. Its velocity and course were observed to change as if it were not inert. Attempts were made to signal to it. A Pluto four-stage missile took off and made contact, and immediately ceased to communicate with base.

"The object landed on Earth at 3:05 Eastern Standard time eight days ago. Again attempts at communication were made. There was no response. Instead, the pressure wall with which we are now familiar appeared in a complete circle around the landed object. No word was heard from anyone within three miles of the landing place. Persons in that area are presumed dead. Artillery opened fire on it. Later rocket missiles and ICBM's with atomic warheads were launched. They did not detonate. The pressure wall has continued to expand up to the present time. All this is doubtless familiar.

"It has to be acknowledged that at the present time we have not seen any of the occupants of the landed object. We have been unable to open communication with them. We do not know what they are like or what their intentions are, except what the pressure wall seems to say."

The screen went dark. Tony said, "We've one bit of information they haven't. We're inside the force field they call a pressure wall. Once you're inside it, it doesn't kill you. And sound waves echo from it. That's the explanation of the hellish thunder last night. I'm sure we're inside because of that, and because there were no birds or insects around us this morning. They've evacuated, too."

He drummed on the arm of the microfilm viewer chair.

He got up. He walked away, searching with his eyes. He saw a sign

which said “FONS.” It was quite reasonable. A library of any period would be a logical place for public telephones. Phones did not require humans to keep them operating.

He found the phones. He followed directions. He called Chicago. No answer. New Orleans. No answer. He tried Denver. An astonished voice replied. Evidently the call came from a place where no living being was supposed to be.

He spoke carefully. He didn’t identify himself. He described conditions inside the pressure wall. He ended, “Maybe if you can find a river deep enough, you can send a sub up it and under the pressure wall. Then you can come up inside it and take action. I’ve no idea what that action can be. The fact that the pressure wall echoes thunder should be informative. That’s all I can tell you.”

The voice babbled for more information. There were places on the West Coast where every ship was already filled with refugees and rafts were being built to take more, but all that could be done would be to tow them out to sea and pray for calm weather.

“Sorry,” said Tony. “That’s all I know. If I find out any more I’ll report it.”

He went back to Doug, who moved away from a microfilm viewer with something of a guilty air.

“Who’s Who?” asked Tony. “Or is it Who Was Who? I suspect it isn’t wise. But—” Then he said, “No. Watch what I punch for.”

He had trouble. What he wanted was under a sub-sub-sub-sub section of American History. Eventually a newspaper clipping, very old, appeared on the screen. A voice read it, “Houston, Texas, January 23rd, 1941. Mrs. Elena Smith, eighty-six, died at the home of her daughter today. Mrs. Smith was the last survivor of the whites who defended themselves agains a massive Indian attack at Adobe Walls in 1874. She was the only woman present. Born in 1855, she was widowed at the age of seventeen and was nineteen at the time of the battle. Two years later she married John H. Smith, who died in 1923. She is survived by four sons, three daughters, and twelve grandchildren.”

Tony’s face was immobile. He pushed the “Cancel” button.

“Now, what can anybody do about a thing like that?” he asked detachedly. “Doug, you’re a prominent scientist. What does ‘Who Was Who’ have to say? Does it say you married MacGregor?”

Doug said uncomfortably, “Yes. We’ll have three children. It won’t be bad …”

“But you’ll know,” said Tony. “You’ll have troubles, but they won’t be real, because you know how they’ll end. You’ll have triumphs, but

you'll have discounted them before they happen. I'm wiser!"

He looked grimly at a microphone-viewer screen. He turned away.

"I wrote down just where that alien object landed. Let's go have a look at it."

MacGregor's voice came in the headphone behind his ear.

"And I won't be worried," she said contentedly, *"because nothing can happen to Doug. Because it didn't!"*

Tony and Doug towed the floating traveller—half a foot above the ground—outside the public library of St. Louis. Somehow it didn't occur to them to find out what day and month and year they were in.

They got into the traveller and it lifted in obedience to MacGregor's use of the controls a thousand miles and perhaps some centuries away. It headed sturdily in the direction of the landing place of an object from somewhere beyond Saturn. There was wind, and it was not planned as a flying vehicle, any more than the rabbit harness had been designed to do air reconnaissance. But it served. High speed was not practical. Tony hunched himself to make the wind of their progress less uncomfortable.

The tips of the city's towers alone remained above the horizon when Tony said abruptly, "Doug, why did the Indians intend to wipe out Adobe Walls?"

"Eh?" Doug had been thinking pleasurable thoughts. He was startled by the question. "What do you mean?"

"White men were dangerous to them. So they fought," said Tony. "Why do these aliens try to wipe out humans? For the same reason? Because humans are dangerous to them?"

Doug frowned, with the wind of the traveller's motion making noises in his ears.

"They wouldn't communicate," said Tony. "That could be because we might find out something. What they'd want—what any reasoning creature would want—would be the safest way to gain his end. If we could learn too much, they wouldn't risk communicating. I think we're dangerous."

Doug said uneasily, "Ann? What's your opinion?"

"I'm not really thinking now, Doug."

Doug looked embarrassed. The traveller went on. After a time Doug murmured to his lapel microphone. Then he realized that Tony could pick up what he said. Kirk and Sam Creighton and Senator Clark could hear every word from the loudspeakers in the Tunnel chamber. His embarrassment became acute.

The traveller went on for hours. Then MacGregor said, *"Not much farther!"*

The ground below them looked exactly as if all the affairs of the world went on without disturbance or distress. There were fields in peculiar geometrical shapes. There were patches of woodland and highways like dark threads and meandering water courses. The traveller went cautiously lower. It occurred to Tony that in flight like this, for which it wasn't intended, the traveller would look as irrational as a flying carpet. It moved slowly compared to ordinary flying things. The newsfilm in the library in St. Louis had said that shells went off and ballistic missiles went off merely on the way to the object—whatever it was—from which the pressure wall was generated. It was a temptation to try to imagine the creatures who would generate it. They would be herbivores, for one thing, or they'd have killed off the plant life with the animal.

There was a grayish blob against the horizon. It was almost a globe. It was probably three hundred feet in diameter.

"Down low!" commanded Tony abruptly. "We might land. It could be a good idea."

MacGregor obediently slowed the traveller and brought it to a gentle landing behind a thin screen of trees. The object they could see through the trees had never been built on earth. Tony gave due warning and got out. He went to the row of trees and stared at the enormous sphere. But it wasn't a perfect sphere. It wasn't made of flat plates welded together. It wasn't properly rounded. Its surface was actually an assembly of concavities. It looked as a ballon might look if it were trying to deflate and couldn't because of some sort of framework inside.

There was no movement anywhere. The traveller could have been spotted by an observer, even if radar didn't report its approach. But the news in the library said nothing about radar, and assuredly it would have been suspected. Actually, a scanning radar beam wouldn't be ideal for space. Something like the relay system of a proximity fuse would be better. That ignored stationary objects, and though it detected slow-moving approaching ones, it was most significantly disturbed by high-speed approaching objects. That would be right for artillery shells and meteoric masses and even high-speed planes and bullets. But it wouldn't take note of the traveller.

It was possible, then, that their detection system hadn't picked up the traveller because it moved at practically a snail's pace.

Something else followed. A spacecraft with proximity-type detectors and meteor repellers—it wouldn't need a massive metal hull. It could be covered with fabric. Sealed in with cloth. It could be inflated to its desired shape and size, like some very early rockets and the orbiting balloons among the first clumsy artificial satellites. Yet a fabric-hulled

spacecraft would need a framework to hold its engines and its living-quarters and to contain its stores. It looked like this was exactly what Tony saw.

He went back to the traveller. Absorbed in thought, he stubbed his toe on a stone. It hurt his foot. He took three steps and then stopped. He looked carefully at the rock. Then he looked for others, perhaps more suitable for a sudden, childish purpose. But he ended by picking up the stone he'd stumbled over. He carried it, staggering, to the traveller.

Arrived there, he said, "Listen carefully, Ann! I want you to notice exactly what your vertical coordinate dial setting reads. I want to take this rock on board the traveller, and I want you to adjust your controls to lift it and carry it where I'll tell you. Then I want to drop it and have you keep us from hitting the sky because of dropping all that weight. Can you do it?"

"Since nothing can happen to Doug, I'll try."

Tony got the rock into the traveller. At his word, MacGregor applied upward thrust by means of controls in the Tunnel chamber. The traveller lifted, at first tentatively but then confidently.

"Which way?"

He told her. Perhaps the installation of the picture tubes was not perfect. It is unlikely that MacGregor would have obeyed his orders if she'd seen exactly what they meant. But she did accept them.

Presently, preposterously, the traveller hung motionless in the air almost a thousand feet high and directly above the huge, alien, untidy construction on the ground. There was no movement. There seemed no living creature on watch. But none should have been needed. No living member of the animal kingdom, no bird or beast or insect; not even a caterpillar or an earthworm should have been alive outside the alien object within at least a thousand miles.

So Tony dropped a three-hundred-pound rock from a height of a thousand feet in the bright sunshine.

At first its downward movement was too slow to actuate a detector relay. When it moved fast enough, it was too close to be handled by equipment that should have dealt with it at enormously greater distances.

The rock hit almost the exact center of the object from space. The hull was fabric. The stone went through. The interior of the object was of alien design and materials and for alien purposes. Nobody knows what happened. But a three-hundred-pound rock falling a thousand feet hits with an impact of three hundred thousand foot-pounds. A ship built to use fabric for a hull to save mass would also use lightweight frame members, nonmetal floorplates and honeycomb

stress-members. It would not be made to resist impacts when it had equipment to prevent them in space.

The falling rock hit this, and that, and the other thing. Perhaps later generations will find a ship of this kind and examine it after they have dealt with its crew. Then exactly what happened may be known.

But there was a sudden enormous flame. Maybe the fuel store went. The fabric hull flamed and glowed and was not. Magnesium-alloy frameworks, plastic floorplates, honeycomb structures of great engineering design—all manner of things shriveled and ceased to exist. Something very massive and heavy did fall crashing through wreckage to the ground. Then Tony saw things come writhing out of the self-incinerating object. He didn't see exactly what they were like, but they shriveled in the flame which encompassed them.

In the traveller, Tony said grimly, "Ann? Will you bring us home, now? I think Doug has something to say to you."

She did. And Doug had said quite enough during the darkness, but she didn't seem to mind his saying them again.

Tony explained in detail to Kirk and MacGregor and Sam Creighton and to Senator Clark. This had happened, and that, and the other. In response to questions, this thing he didn't know; that he couldn't guess. He said carefully, "There's a lot to know about time travel, and some of it I think I'd rather not find out. But it's evident that one can't change the present by going into the past. We didn't! But the past can include what someone from the future brought about. That—we've evidence for that! Senator Clark is the evidence."

The Senator nodded. He waited impatiently for Tony to be done, because of something he wanted urgently to say, but which had to come after Tony had finished.

"There's another oddity," said Tony. "It was important that Adobe Walls not be wiped out. Doug and I, going back from now, were told what the history of now said happened then. But it wasn't going to happen. So we made it happen. We broke the ridge-pole. We also helped fight. Again something in the past, and in this case something historical, came about because of time travel."

Senator Clark moved restlessly. He had a memorandum in his hand. He wanted to speak, referring to it.

"And there's a third thing we've learned," said Tony. "Something in the past can apparently go into the future and affect it. That city of the future and the alien thing—it seems to me that in the year of the alien landing the Time Tunnel had ceased to exist. I suspect that it had done its work. It had finished its job and locked itself up and thrown away the key and let itself be forgotten. So we had to move in and

take over—but maybe it was known that we would before the Tunnel closed itself down! After all, the greatest thing, the greatest purely human-made thing could do would be to complete its work and then stop working!"

He took a deep breath.

"I think it's certain," he said confidently, "that when the alien object was destroyed, the pressure wall generator inside it was smashed too. So the danger of the death of us humans ended. The wreck was probably found, of course. And there was probably much to find out even from a smashed and burned alien ship. Maybe a better space-drive than was known before. Maybe an infinite lift in science. But we'll never know. Anyhow I won't! I'll never visit the past again and certainly never the future—"

Senator Clark could wait no longer. He'd fidgeted but kept silent while what might be called a debriefing took place. But he was chairman of an important committee in Congress, which had much to do with defense. Now he said with fine authority, "I am pleased! I wish to express my admiration of everything that has been done! I did disagree violently with the entire Project Tic-Toc. But in some respects my objections have been—ah—removed, and in others I see that suitable care will prevent difficulties. But I must point out something!"

He paused, then said impressively, "I shall take this up with the President. The Time Tunnel, if only its existence can be kept secret, can become the most admirable achievement of the human race! In the Time Tunnel's messenger-travellers, we can go or send into the past! Ignore all else, but—we can move in the past! We can return to the present wherever we wish! Consider a thing that causes many gray hairs in Washington!"

Again he paused. Tony and Kirk and Doug and MacGregor listened with something like mystification in their expressions.

"Consider a situation," said the Senator in a confidential tone, "when a diplomatic situation has reached a point of critical tensity. Where an unwarned atomic attack on us is almost a certainty. Without the Time Tunnel we could do nothing but anticipate that attack and destroy our enemy before he could act. But he could anticipate our anticipation and strike first. So we might have to anticipate—"

Doug said politely, "I think we have the picture, Senator. But what then?"

"The Time Tunnel," said the Senator triumphantly, "could send a traveller five hundred years into the past. Across the Atlantic! Across the Pacific! Anywhere on on Earth, wherever we had an enemy! And the Tunnel could bring it back into the present—in the most secret, most sacred, most guarded hidden place the enemy possessed! It

might be where enemy atomic warheads were stored! Our traveller could remove them—perhaps substitute quite harmless ones in their stead! You see?"

Tony nodded. He looked more than a trifle puzzled. The Senator said still more triumphantly, "No other man like Hitler will be able to attain to Hitler's power! The Time Tunnel can stop him or any other dangerous man from going unchecked to bring war and ruin on humanity! The Time Tunnel will do all this! But it will have to be used with infinite caution. If its existence were suspected we would be hated as no nation was ever hated before! But if only nobody knows that it exists, the Time Tunnel can sway and incline and guide the events of the world so that the whole planet may some day be ruled for the benefit of humanity!"

He stopped. There was a somehow embarrassed silence. Then Tony said uncomfortably, "But—Senator Clark—what do you think we built the Time Tunnel for? What else could we have had in mind?"